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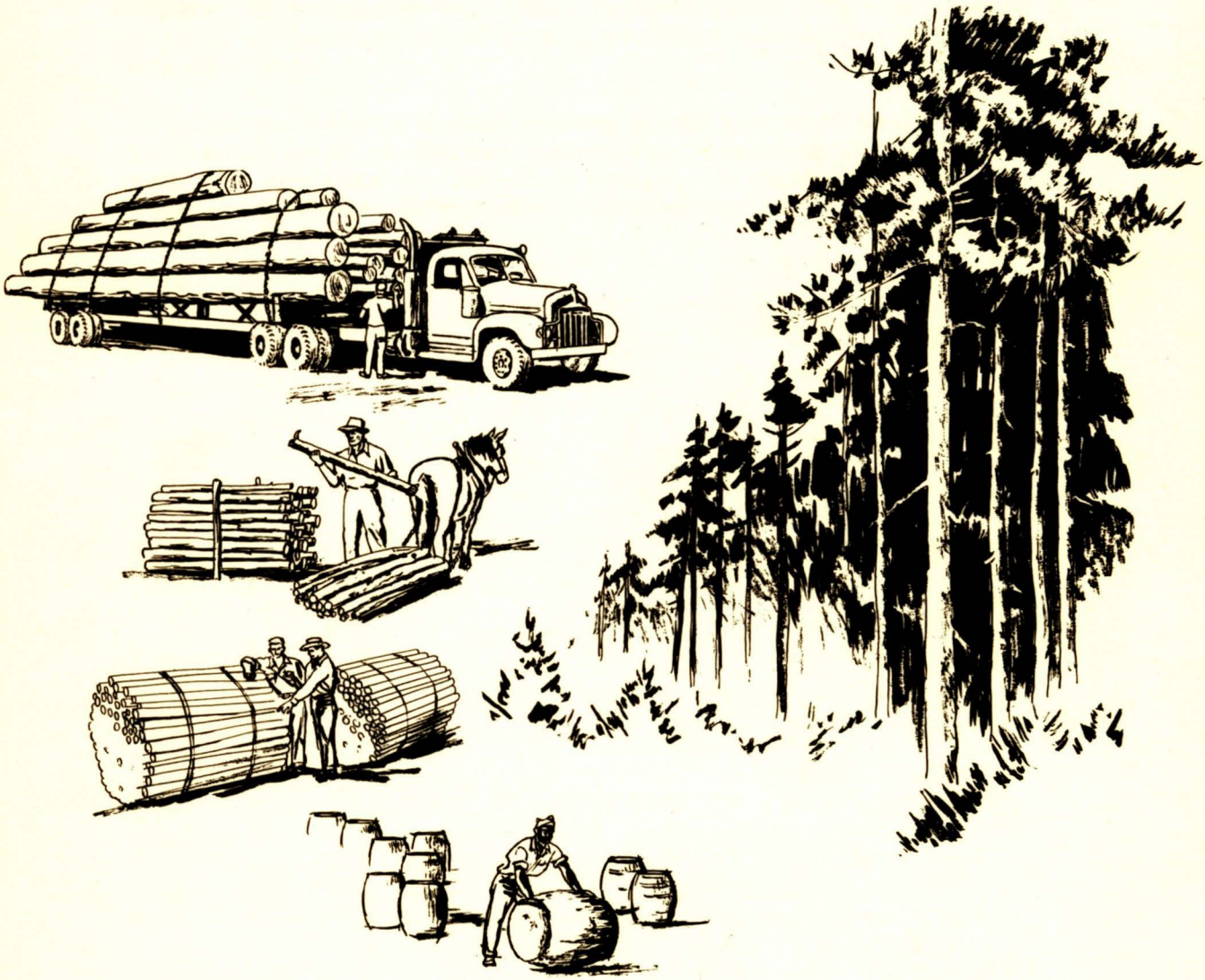
The Demand and Price Situation for Forest Products



FOREST SERVICE AND COMMODITY STABILIZATION SERVICE
U. S. DEPARTMENT OF AGRICULTURE ··· NOVEMBER 1959

FOREWORD

The purpose of this report is to present information on current trends in demand and prices for forest products for use as background information for the Outlook Conference held by the U.S. Department of Agriculture in November 1959. Major emphasis has been placed on national trends although much of the information on prices is from reports published for individual States. These along with other reports containing information on prices or production of forest products are listed under "Literature Cited."

The analysis of timber products was prepared by Dwight Hair in the Division of Forest Economics Research, Forest Service, and the analysis of naval stores by Herbert B. Wagner in the Tobacco Division, Commodity Stabilization Service.

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OUTLOOK SUMMARY

Rising sales, production, and employment have carried economic activity to new records in 1959. Gross national product during the second quarter reached an annual rate of 485 billion dollars--about 15 billion dollars above the first quarter of the year and 57 billion dollars above the first quarter of 1958. New housing starts have maintained an annual rate of about 1.4 million units for several months, and in June the Federal Reserve index of industrial production reached a peak at 155 percent of the 1947-49 average.

The total volume of round timber products produced in 1959 is estimated at 11.2 billion cubic feet. This is 9 percent higher than production in 1958 but 3 percent below 1956, the peak post-war year. Production of industrial roundwood is estimated at 9.5 billion cubic feet and fuelwood 1.7 billion cubic feet. Saw logs, veneer logs, and pulpwood all showed increases in production in 1959.

Stumpage prices for national forest timber increased rather sharply during the first two quarters in 1959.

Lumber production in 1959 is estimated at 37 billion board feet--about 12 percent above production in 1958, and 3 percent above average annual production during the last five years. Total lumber consumption, i.e., domestic production plus imports minus exports and additions to stocks, is estimated at 40.1 billion board feet. This is the highest level of consumption attained since the boom year of 1955.

The West is expected to account for about 54 percent of the lumber produced in 1959, the South 33 percent, and the North the remaining 13 percent. Softwoods, chiefly Douglas-fir, southern pine, ponderosa pine, western true firs, and hemlock, account for about 80 percent of total production.

In contrast to the increase in production, saw log price quotations have shown little change. The wholesale price index for lumber, however, has increased sharply, rising from 115.9 in April 1958 to 130.0 in June 1959 (1947-49 = 100). In this period most of the materials which compete with lumber showed little or no price increase.

Pulpwood production in 1959 is estimated at 36 million cords. This represents a new production peak--2 percent above the high reached in 1956 and 8 percent above production in 1958. Softwoods, such as southern pine, hemlock, Douglas-fir, spruce, and true fir, account for about 82 percent of the pulpwood produced and hardwoods 18 percent. About 61 percent of total production is in the South, 20 percent in the West, and the remaining 19 percent in the North.

Production of chipped residues obtained from sawmills and veneer mills is estimated at 6 million cords, a peak in a trend that has been sharply upward since 1944. During the past 3 years, production of pulpwood from residues has increased about 2.5 million cords while production of roundwood pulpwood has decreased 1.7 million cords.

Pulpwood prices have been rather steady in recent years. In the Southeast, for example, prices of rough pine pulpwood at local points of delivery in mid-1959 averaged $15.60 per cord, about the average for the period 1956-1958.

Softwood peeler log production in 1959 is estimated at 3.1 billion board feet--about 16 percent more than in 1958 when 2.7 billion board feet was produced. This is generally in line with long-run trends. Production of hardwood veneer logs in 1959 amounted to 1.0 billion board feet--about the same as in recent years.

Price quotations for Douglas-fir No. 1 peeler logs in July 1959 ranged between $111 and $116 in the Puget Sound log market and from $108 to $113 in the Columbia River market. This price level has been maintained without significant change during the past 3 or 4 years. Prices for hardwood veneer logs have displayed a similar stability.

Production of other industrial roundwood products such as cooperage logs, poles and piling, fence posts, hewn ties, round mine timbers, and miscellaneous products is estimated at 730 million cubic feet in 1959--about 8 percent of the industrial roundwood produced. Recent trends in production show increases for some products and decreases for others with little change in total production.

Consumption of Christmas trees in the United States in 1959 is expected to be somewhat above 40 million trees. Imports from Canada have totaled between 10 and 12 million trees annually in the last few years. Prices paid for Christmas trees on the stump have varied widely, ranging from as low as 25¢ for wild trees to $2.00 or more for plantation grown trees. The relatively high prices paid for plantation-grown trees has attracted many new producers, suggesting the likelihood of increasingly strong competition for available markets in the future.

A marked and growing disparity between production of and demand for rosin is evident in 1959. This "gap" is caused by greatly increased domestic and export requirements in the face of relatively static output. The rosin carryout next March 31 is likely to be less than half that of the previous year. In 1960 and for some time thereafter this situation may be further aggravated by decreasing production. The outlook is for sharply lower steam distilled wood rosin production, which probably will not be fully compensated by increases in tall oil and gum rosin output.

Turpentine production should be slightly higher in 1959, exports lower, and little change in domestic consumption or carryout stocks.

Gum rosin and gum turpentine prices in the 1959 crop year are expected to be about 12 and 4 percent higher, respectively, than a year ago. The rising trend in rosin prices is likely to continue at least into 1960 although turpentine prices will level off.

ECONOMIC SITUATION

Since the spring of 1958 rising sales, production, and employment have carried economic activity to new records. This is illustrated in figure 1 which shows that gross national product reached 485 billion dollars in the second quarter of 1959 (seasonally adjusted annual rate)--about 15 billion dollars above the first quarter of the year and 57 billion dollars above the first quarter of 1958 (table 1) (23).[1]

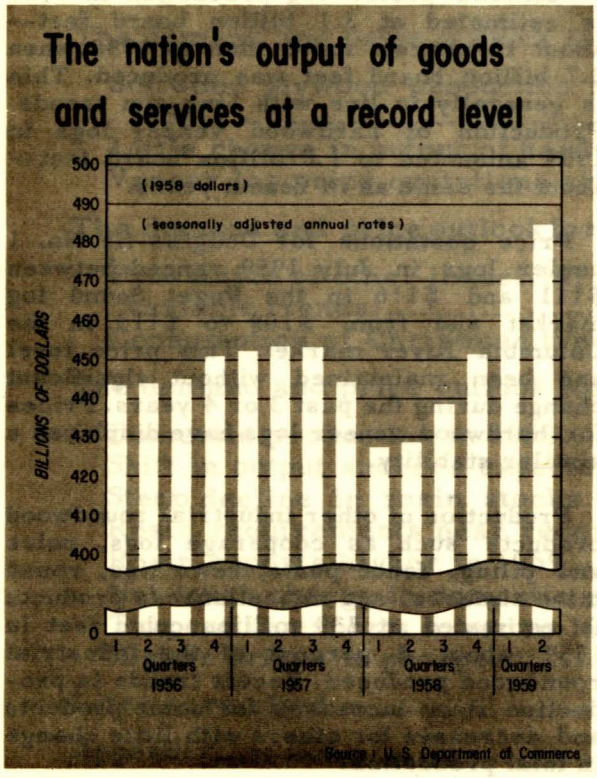

Figure 1

New construction has more than kept pace with the rise in the output of goods and services. Between May 1958 and July 1959 the annual rate of new construction (seasonally adjusted) climbed from 47.2 billion dollars to 55 billion dollars--a rise of 17 percent (24) (fig. 2). Nearly all of this increase was in residential construction, which, as measured by new nonfarm housing starts, has maintained a seasonally adjusted annual rate of 1.4 million units since November of 1958.

Although total expenditures for nonresidential construction showed little change in the last year or so, substantial changes have occurred in individual components. Public expenditures for highways and military facilities, for example, have increased while private expenditures for most industrial construction declined.

The Federal Reserve index of industrial production in June 1959 stood at 155 percent of the 1947-49 average (seasonally adjusted). This was about 23 percent above the recession low of April 1958 and 8 percent above the level of January 1959 (2).

[1] Numbers in parentheses refer to literature cited.

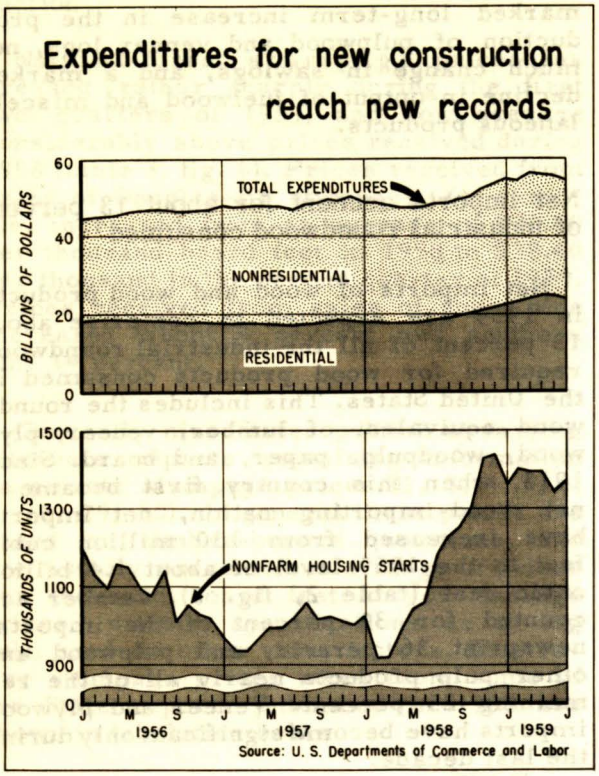

Figure 2

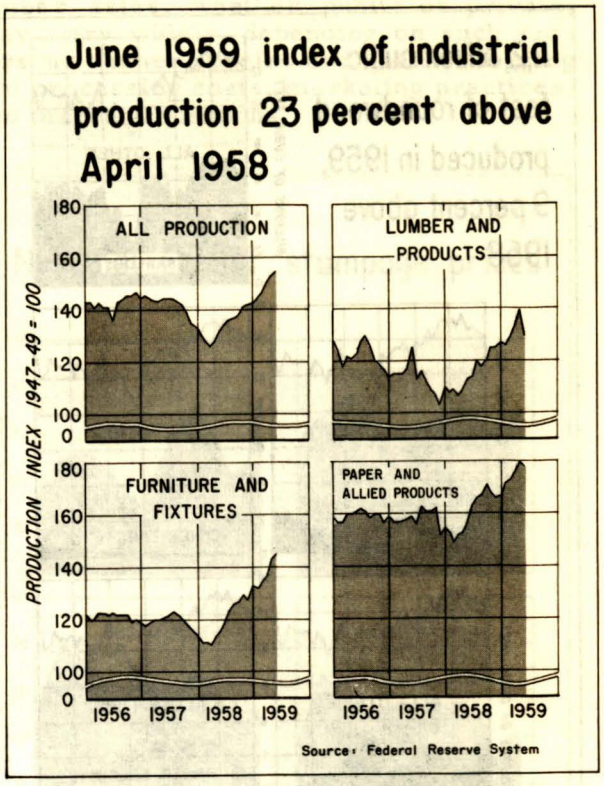

Figure 3

Lumber, furniture, and paper and allied product industries have shown similar large increases in output (fig. 3). Employment also has increased substantially from about 62 million persons in early 1958 to the July 1959 level of about 67.5 million (25).

The long-range economic outlook for forest products is considered to be promising. It is anticipated that residential construction, for example, will increase substantially in the early 1960's as the upsurge in birth rates that started in the early 1940's results in increased formation of new families. Some further impetus in construction is expected to come from the continued movement of city populations to suburbs and further migration, and by increases in income which will permit improvement in housing. Increased family formation and more residential construction will in turn tend to increase demand for furniture, radio and television sets, shipping containers, and other items fabricated in whole or in part from forest products.

By 1975, Forest Service projections indicate that the Nation's output of goods and services may be 60 percent above the 1959 level, and that residential construction may amount to as much as 2 million units a year (16, 18). This outlook suggests better market opportunities for timber products and more favorable opportunities to practice forestry. It also emphasizes the importance of strengthening forestry efforts in the United States, particularly on small forest ownerships in the hands of farmers and other private owners.

THE DEMAND AND PRICE SITUATION FOR STUMPAGE

Roundwood production in 1959 about 9 percent above 1958

Total production of round timber products in 1959 is estimated at 11.2 billion cubic feet (table 2, fig. 4). This is about 5 percent above 1957 and 9 percent above 1958, but 3 percent below production in 1956--the post-war peak year.

Production of industrial roundwood (i.e., all round products except fuelwood) is

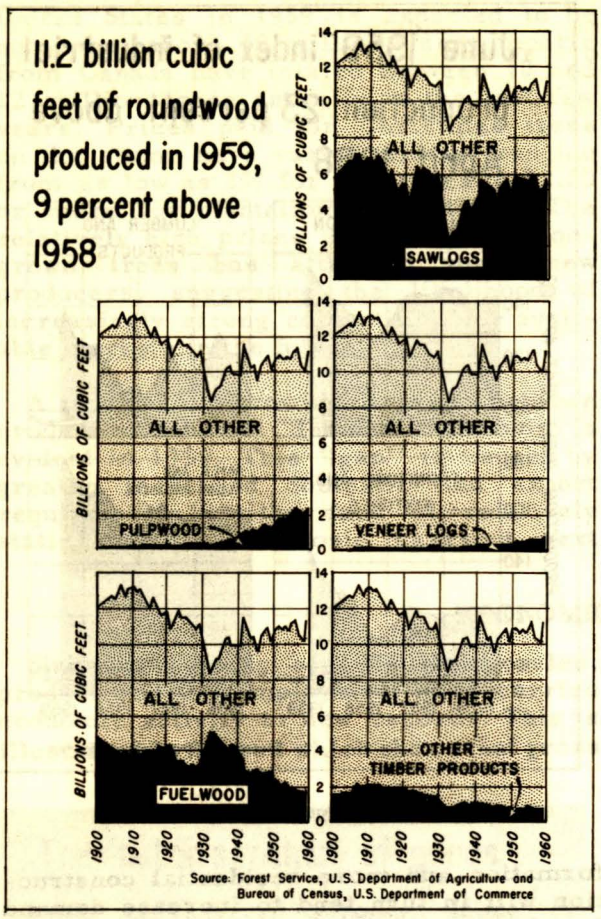

Figure 4

estimated at 9.5 billion cubic feet, about 11 percent above 1958. Sawlogs are expected to account for 61 percent of this total, pulpwood 24 percent, veneer logs 7 percent, and miscellaneous products, such as cooperage logs and bolts, poles and piling, and mine timbers, the remaining 8 percent. Sawlogs, veneer logs, and pulpwood account for most of the estimated increase in production in 1959.

Output of fuelwood is expected to decline about 2 percent in 1959. Continued decline in the use of fuelwood largely reflects the substitution of more convenient fuels, such as coal, oil, gas, and electricity in heating and cooking. It also reflects the expanding use of slabs, edgings, and other mill residues in pulp manufacture.

Historical trends in the production of roundwood products are graphically illustrated in figure 4. This figure shows a marked long-term increase in the production of pulpwood and veneer logs, not much change in sawlogs, and a marked decline in output of fuelwood and miscellaneous products.

Net imports account for about 13 percent of industrial roundwood consumed

Net imports of wood and wood products in 1959 are expected to comprise about 13 percent of all the industrial roundwood required for wood products consumed in the United States. This includes the roundwood equivalent of lumber, veneer, plywood, woodpulp, paper, and board. Since 1915, when this country first became a net wood-importing nation, net imports have increased from 130 million cubic feet to the 1959 level of about 1.4 billion cubic feet (table 2, fig. 5). Lumber accounted for 39 percent of the imports, newsprint 36 percent, and pulpwood and other pulp products nearly all of the remaining 25 percent. Veneer and plywood imports have become significant only during the last decade.

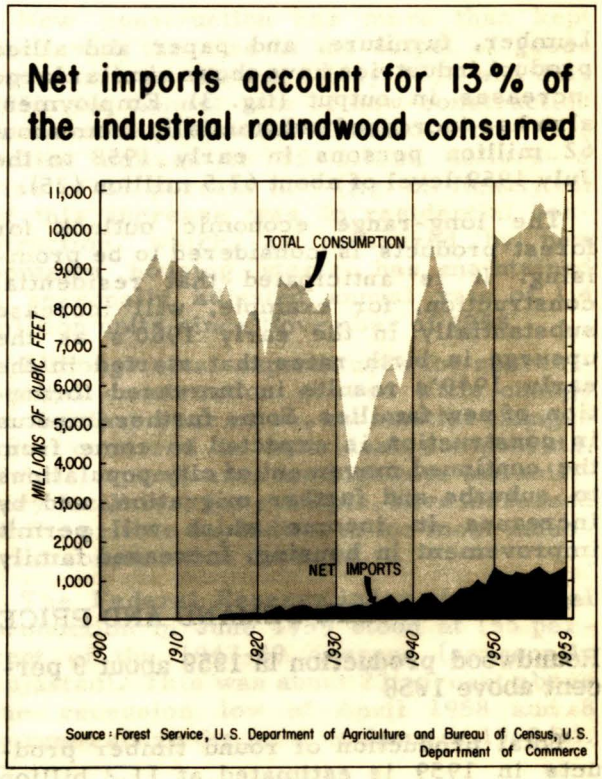

Figure 5

Stumpage prices increase along with production

National-forest stumpage prices increased rather sharply during the first two quarters of 1959, and now average considerably above prices received during 1958 (table 3, fig. 6). Prices received from sales of Douglas-fir stumpage, for example, increased from an average of $21.80 per thousand board feet in 1958 to $38.40 per thousand in the second quarter of 1959. Prices received from sales of sugar pine increased about 4 percent and southern pine 14 percent.

Currently nine States publish at varying intervals reports containing information on private stumpage prices (1, 3, 4, 5, 6, 7, 10, 29, 30). In general these prices are based on timber-buyers quotations, and are usually presented as a range of prices per thousand board feet and/or average prices, without specifications as to log rule used or other value factors. Illustrative stumpage prices taken from some of the State reports published in 1959 are shown in tabulation below:

Species	*State and source*	*Price of stumpage per thousand bd. ft.*
Southern pine:	Louisiana (6)	
Sawlog timber		$31.75
Pulpwood timber		4.30
Gums	Louisiana (6)	10.55
White oak veneer stumpage	Illinois (4)	30.00 - 80.00
Hard maple	Wisconsin (30)	20.00 - 50.00
Yellow birch	Wisconsin (30)	30.00 - 65.00

Stumpage prices received for individual timber sales, whether public or private, may vary widely, depending on such factors as timber species and quality, logging and processing costs, marketing practices, and market conditions.

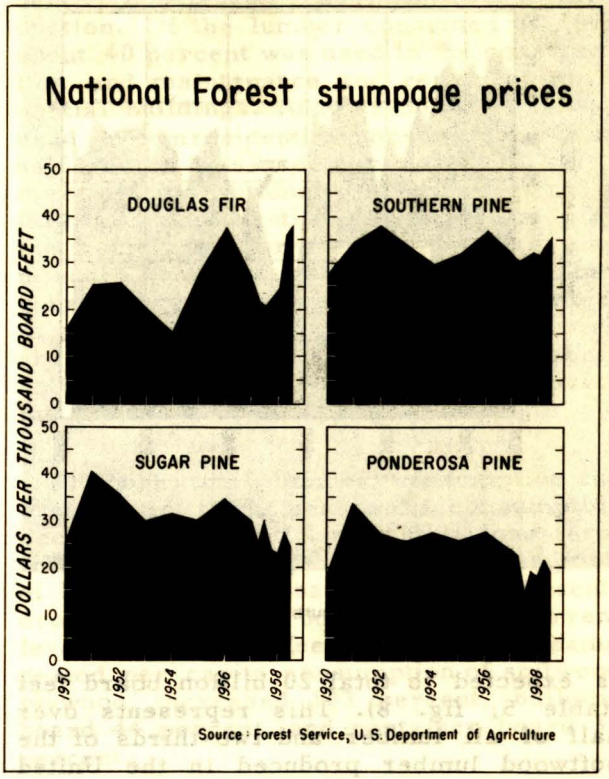

Figure 6

DEMAND AND PRICE SITUATION FOR SAW LOGS AND LUMBER

Lumber production in 1959--12 percent above 1958

Lumber production in 1959 is expected to amount to 37 billion board feet--12 percent above production in 1958 and 3 percent above average production during the last five years (table 4, fig. 7). Total lumber consumption, i.e., domestic production plus net imports minus additions to stocks is estimated at 40.1 billion board feet. This is the highest level of consumption attained since 1955.

Domestic lumber production in the period 1954 through 1958 averaged 35.9 billion board feet, compared with average imports of 3.3 billion board feet and average exports of 0.8 billion board feet. Most lumber imports came from Canada; lumber from tropical countries, while highly important for some special uses, accounted for only a small part of the total.

Lumber imports in 1959 are estimated at slightly over 4 billion board feet. If realized, this will be a record level of imports.

More than half the saw logs produced cut in the West

Domestic lumber production is concentrated in the West[2] where 1959 production

[2] The West includes the 11 western States and South Dakota. The South consists of the 12 most southern States, including Virginia. The North includes the remaining 24 States.

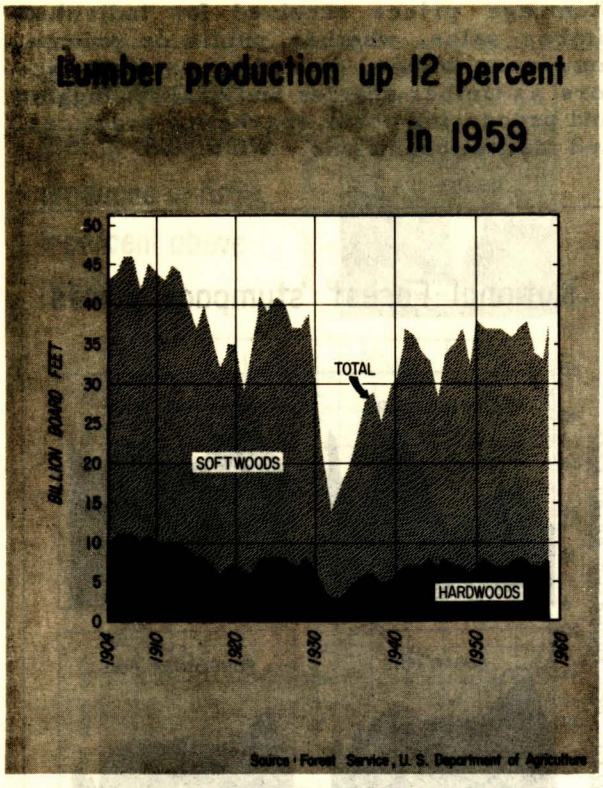

Figure 7

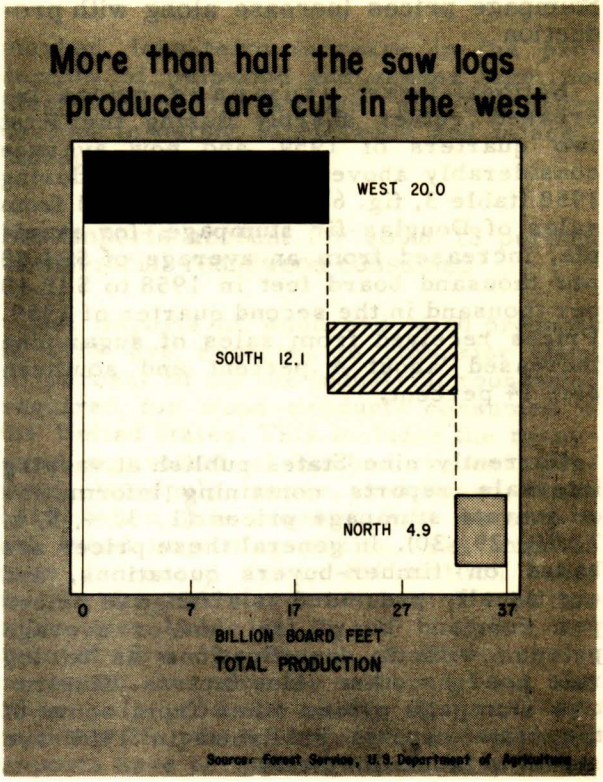

Figure 8

is expected to total 20 billion board feet (table 5, fig. 8). This represents over half of all lumber and two-thirds of the softwood lumber produced in the United States. The three Pacific Coast States--Oregon, Washington, and California--are expected to account for about 80 percent of the cut in the West and 45 percent of national production. Oregon is the leading State in lumber production.

The West will continue as the most important lumber producing region for some time to come, largely because it contains about 1,345 billion board feet of sawtimber--two-thirds of the Nation's present supply. This region also has 80 percent of the country's softwood growing stock volume, most of which is old-growth sawtimber of relatively high quality. Commercial forest lands in the West, however, make up only 24 percent of the timber-growing acreage in the country.

The South in 1959 is expected to produce about 12.1 billion board feet of lumber and account for 33 percent of national production. There has been no marked trend in lumber production in the South since 1940, although production of softwood lumber has declined while hardwood lumber production has increased. In 1954, six southern States--North Carolina, Georgia, Alabama, Virginia, Arkansas, and Mississippi--each produced more than a billion board feet of lumber.

Although the South has only 23 percent of the Nation's present growing stock and 18 percent of the sawtimber, it does contain about 40 percent of the Nation's commercial forest land. Growth rates on this land are high, logging conditions are relatively easy, year-round woods employment is possible, and labor supply is relatively good. Market location is also highly favorable with relatively short distances to the great industrial centers in the North and Midwest.

Lumber production in the North in 1959 is estimated at 4.9 billion board feet, or slightly above the average for the past 15 years. Pennsylvania, Maine, New York, Michigan, and Wisconsin are the leading

lumber producing States. The North contains 36 percent of the Nation's commercial forest land, but only 22 percent of the growing stock and 14 percent of the sawtimber, mainly hardwoods. Timber growth in 1952 exceeded cut, but average timber quality is low and growth is considerably below potential yields.

Softwoods, chiefly Douglas-fir, southern pine, ponderosa pine, western true firs and hemlock, are expected to account for about 80 percent of all saw logs and lumber produced in 1959. Softwoods comprise about 90 percent of the lumber used in construction, the major end use of lumber, and about 70 percent of the lumber used in shipping. Hardwoods, however, are preferred in manufacturing fabricated products where they account for about 70 percent of all lumber consumed.

Oak species comprise about half of the hardwood lumber produced and gum, maple, yellow-poplar, and cottonwood most of the remainder.

Saw log price quotations show little change

Several States publish saw log price quotations (1, 3, 4, 5, 6, 10, 11, 12, 14, 28, 29, 30) based on local scaling and grading systems. These data generally indicate that saw log prices have not changed significantly in the last few years. Illustrative saw log prices for various species taken from some of the State reports issued in 1959 are shown in the following tabulation:

Species	*State and source*	*Price of saw logs per thousand bd. ft.*
Southern pine	Louisiana (6)	$52.80
Gums	Louisiana (6)	37.35
White oak	Illinois (4)	24.00 - 60.00
Hard maple	Wisconsin (30)	[1] 40.00 - 65.00
Yellow birch	Wisconsin (30)	[1] 40.00 - 70.00
Douglas-fir (old-growth)	Oregon (12)	[2] 40.00 - 70.00

[1] Woodsrun logs delivered at mill.
[2] River prices at Portland.

Increased demand for saw logs reflects rise in economic activity

The increase in saw log and lumber production in 1959 can be largely traced to the rise in construction, particularly residential construction, and in industrial production. Of the lumber consumed in 1952 about 40 percent was used in the construction and maintenance and repair of residential buildings. Another 33 percent was used in nonresidential construction. Over half of this was used for industrial, commercial, institutional, recreational, military and public utility construction, and the remainder for farms, railroads, and mines. About 17 percent of the lumber consumed in 1952 was used for shipment of agricultural and industrial commodities and 10 percent for manufacture of fabricated products such as furniture and sporting goods.

Although total lumber consumption increased in 1959, per capita consumption declined in a continuation of a long-term trend. Since 1950 per capita consumption of lumber has decreased about 16 percent, dropping from 268 board feet to a current level of 226 board feet (fig. 9). In the same period per capita consumption of softwood plywood increased 133 percent, building board 44 percent, and container board 31 percent.

The wholesale price index for lumber (1947-49 = 100) rose rather sharply during the past year--from 115.9 in April 1958 to 130.0 in June 1959 (table 6, fig. 10). In contrast, most of the materials which compete with lumber showed little or no price change. The changes in price relationship between lumber and competing materials has generally favored lumber since 1950, as shown in figure 10. Except for the past year prices of most substitute materials have increased relative to lumber during this period.

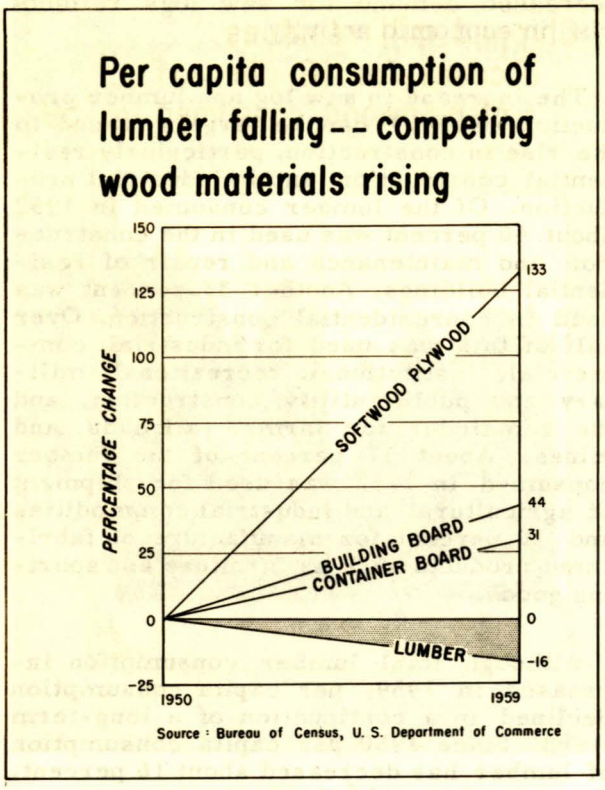

Figure 9

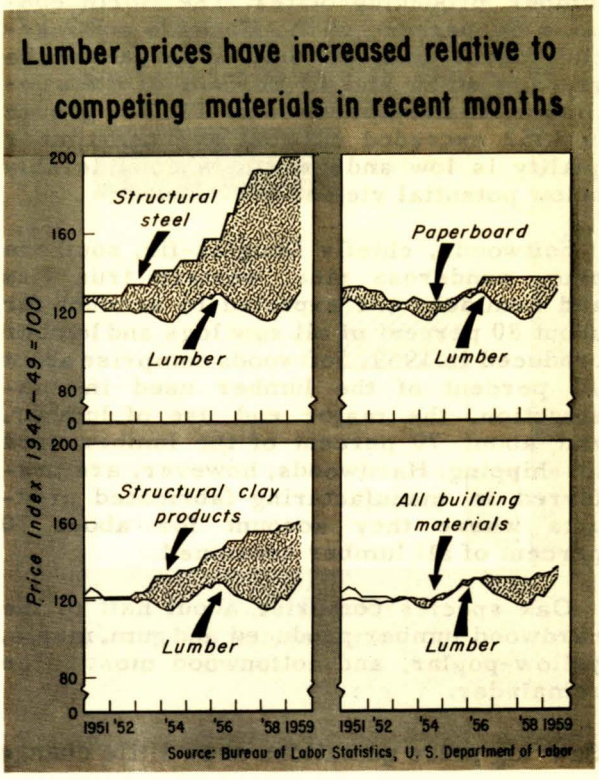

Figure 10

THE DEMAND AND PRICE OUTLOOK FOR PULPWOOD

Pulpwood production reaches peak of 36 million cords

Pulpwood production in the United States in 1959 is estimated at 36 million cords (table 7). This represents a new production peak--2 percent above the previous high reached in 1956 and 8 percent above production in 1958.

Net imports of pulpwood from Canada in 1959 are expected to amount to 1.1 million cords and withdrawals from stocks .3 million cords. Thus pulpwood consumption is estimated at 37.4 million cords--5 percent above the record consumption attained in 1956 (table 8). In addition, it is anticipated that the equivalent of 8.7 million cords of pulpwood will be imported (net imports) in the form of woodpulp, newsprint and other grades of paper, and paperboard.

Softwoods preferred for pulpwood

Softwoods have always been preferred for pulpwood, accounting for between 75 and 85 percent of total production. In 1959 softwoods are expected to account for 82 percent of all pulpwood produced. In the South they comprise 85 percent, in the North 55 percent, and in the West almost 100 percent of total production.

There have been significant changes in proportions of softwood species used for pulpwood, as illustrated in figure 11. In 1958 southern pines accounted for about two-thirds of the round softwood pulpwood consumed, spruce and true firs about a sixth of the total, and hemlock, jack pine, northern red and white pine, lodgepole pine, and Douglas-fir the remainder. This is markedly different from 1920 when spruce and true fir accounted for about three-quarters of the softwood pulpwood consumed and southern pines only 6 percent of the total.

Although the proportion of hardwood pulpwood to softwood pulpwood has not changed appreciably for many years, hard-

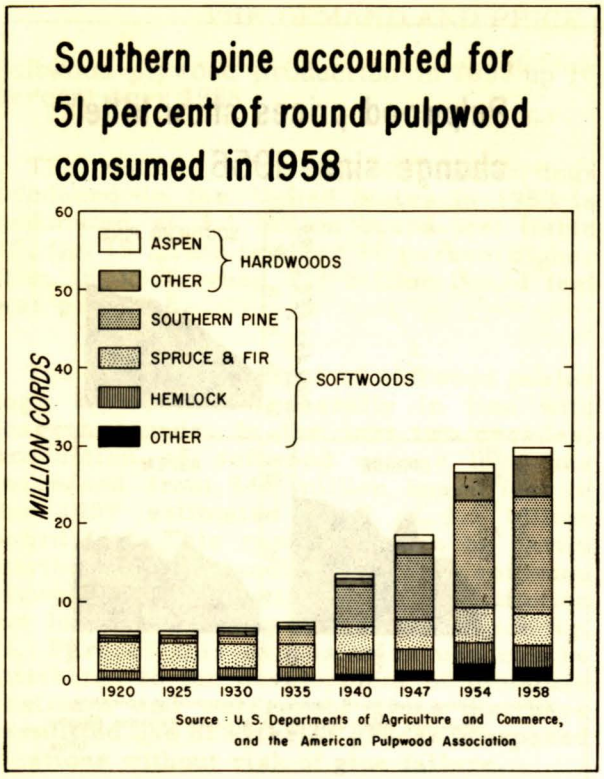

Figure 11

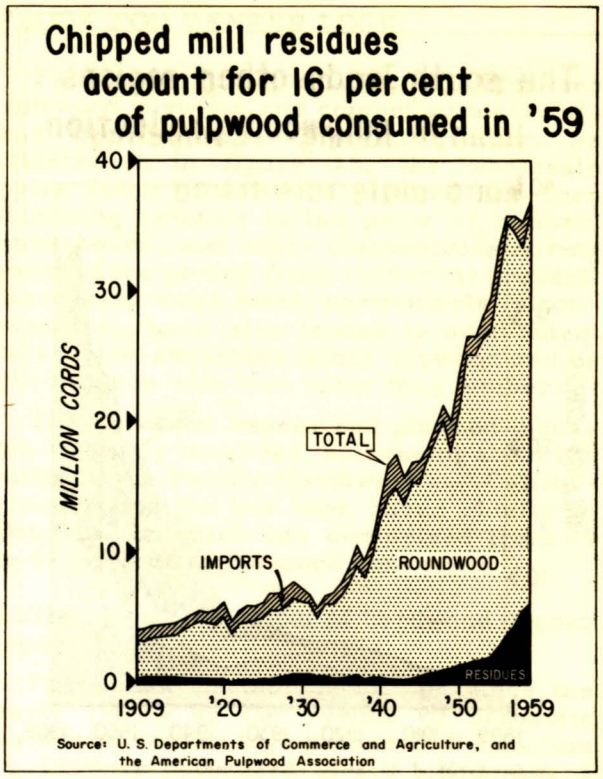

Figure 12

wood pulpwood production has climbed from about 0.8 million cords in 1920 to an estimated 6.5 million cords in 1959. The production of hardwoods--chiefly aspen and gums--has been expanding with increased competition for wood, higher prices for softwood timber, and the development of suitable processes for pulping hardwoods. This has been particularly true in the North where the stands of preferred spruce and fir have not been adequate to meet the needs of the pulp industry and where large supplies of relatively low cost aspen and other hardwoods are available.

Chipped mill residues account for 16 percent of the pulpwood consumed

Use of chipped residues obtained from sawmills, veneer mills, and other sources is expected to reach 6 million cords in 1959, or 16 percent of the total pulpwood consumed (table 8). This marks the peak in a trend that has been sharply upward since 1944, as shown in figure 12. Production in 1959 is expected to include 5.7 million cords of softwoods and 0.3 million cords of hardwoods. Douglas-fir and other western species accounts for about two-thirds of the softwood residues used, and Southern pine about one-third.

The increasing use of chipped mill residues has had a significant impact upon the demand for "round" pulpwood. Thus, since 1956, production of residues has increased about 2.5 million cords while roundwood decreased 1.7 million cords.

The South accounts for 61 percent of the pulpwood produced

It is estimated that about 61 percent of the pulpwood produced in the United States in 1959 comes from forests in the South (fig. 13). Pulpwood production in this region has been increasing rapidly, rising from about 8.1 million cords in 1945 to an estimated 22.0 million cords in 1959. Chipped residues from sawmills and veneer plants has also shown a very rapid climb, rising from 76 thousand cords in 1953 to 1.8 million cords in 1958 (17), or 10 percent of all the pulpwood produced in the South.

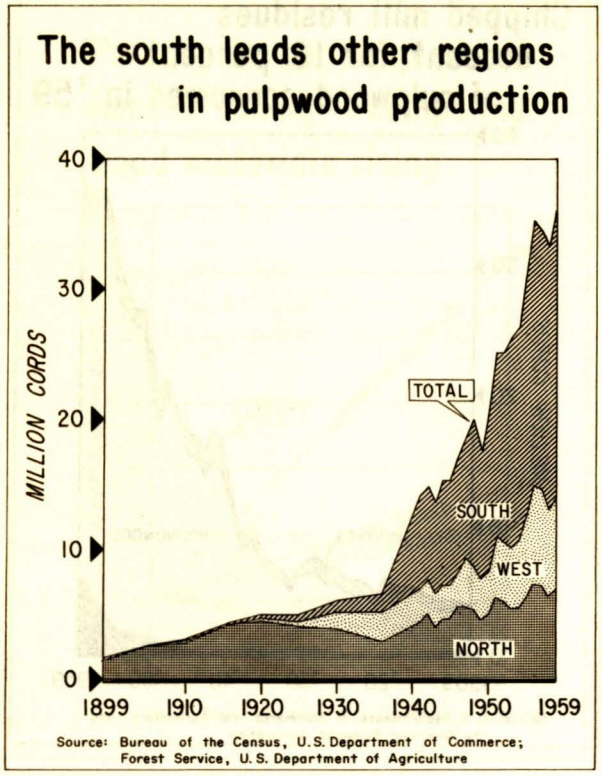

Figure 13

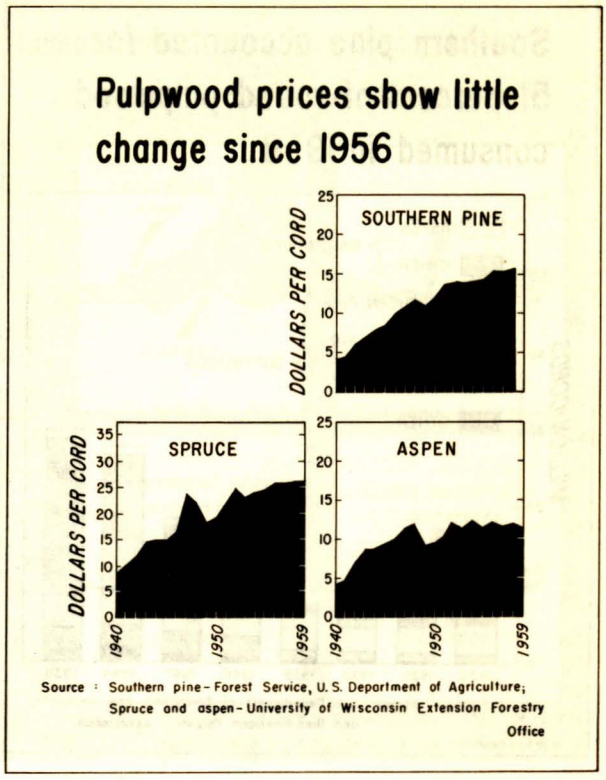
Pulpwood prices show little change since 1956
SOUTHERN PINE
DOLLARS PER CORD
SPRUCE
ASPEN
1940
1950
1959
Source : Southern pine - Forest Service, U.S. Department of Agriculture; Spruce and aspen - University of Wisconsin Extension Forestry Office

Figure 14

In the West, pulpwood production increased from about 2.5 million cords in 1945 to 7.1 million cords in 1959. Use of plant residues is particularly important in this region and residues currently comprise about half of the wood used in pulping.

Pulpwood production in the North has increased slowly in recent years. Most of the increase has been for hardwoods used in the production of semichemical and related pulps. Residues have not been widely used in this region.

Pulpwood prices show little change since 1956

Pulpwood prices at local points of delivery have shown little change since 1956 (table 9, fig. 14). In the Southeast, for example, the price of rough pine pulpwood at local points of delivery currently averages to $15.60 per cord, or about the same as prices in 1956, 1957, and 1958.

Pulpwood prices show considerable variation among regions, depending upon species, availability of local timber supplies, and other factors. Thus, in Wisconsin prices of rough pulpwood f.o.b. car currently average about $26.75 per cord for spruce, $17.25 for pine, and $11.50 for aspen. In the Northeast, prices f.o.b. car average about $20.00 per rough cord for spruce and fir and $14.50 for white pine. In the mid-South prices for hardwoods average about $13.00 per rough cord f.o.b. car.

Several States publish reports containing price quotations for pulpwood, (3, 4, 6, 10, 11, 12, 28, 29, 30). Shown in the following tabulation are illustrative pulpwood prices at local points of delivery taken from some of the State reports issued in 1959 for various pulpwood species:

Species	*State and source*	*Price of rough pulpwood per cord*
Southern pine	Louisiana (6)	$14.75
Hardwoods	Louisiana (6)	12.15
Mixed hardwoods	Wisconsin (30)	10.50 - 13.50
Balsam fir	Wisconsin (30)	20.00 - 22.00
Spruce	Wisconsin (30)	25.50 - 27.00
Pine, Jack and Norway	Wisconsin (30)	17.00 - 17.50
Hardwoods	Illinois (4)	8.00 - 14.00

THE DEMAND AND PRICE OUTLOOK FOR VENEER LOGS

Softwood plywood production in 1959 up 16 percent over 1958

The volume of softwood veneer logs produced in the United States in 1959 is estimated at 3.1 billion board feet (table 10, fig. 15). This is about 16 percent higher than in 1958 when 2.7 billion board feet was produced.

The increased output of softwood peeler logs in 1959 is generally in line with longrun trends. In the last two decades, production of softwood veneer logs has increased from 544 million board feet to the 1959 estimated level of 3.1 billion board feet. This rapid rise can be partly attributed to expanding uses for softwood plywood in construction where substitution for lumber has advanced rapidly (see fig. 9). Part of this expansion in use can be attributed to the development of moisture resistant and waterproof glues that have permitted use of exterior grades in exposed locations without risk of glue failure.

Favorable price relationships between softwood plywood and competing materials has been another important factor. As illustrated in figure 16, the wholesale price index of softwood plywood has been declining relative to the price of lumber, paperboard, and other commodities during most of the period from 1950 to the present. Increasing wage rates, particularly in construction, have also tended to supplement this price advantage since plywood can be put in place with less labor than lumber.

The softwood veneer and plywood industry is highly localized, embracing about 120 mills in the Pacific Northwest and California. Production has been based chiefly on Douglas-fir which has comprised from 95 to 98 percent of the wood consumed.

Little change in output of hardwood veneer logs

There has been little change since the early 1950's in the volume of domestic hardwood veneer logs produced. Production in 1959 is estimated at 1.0 billion board

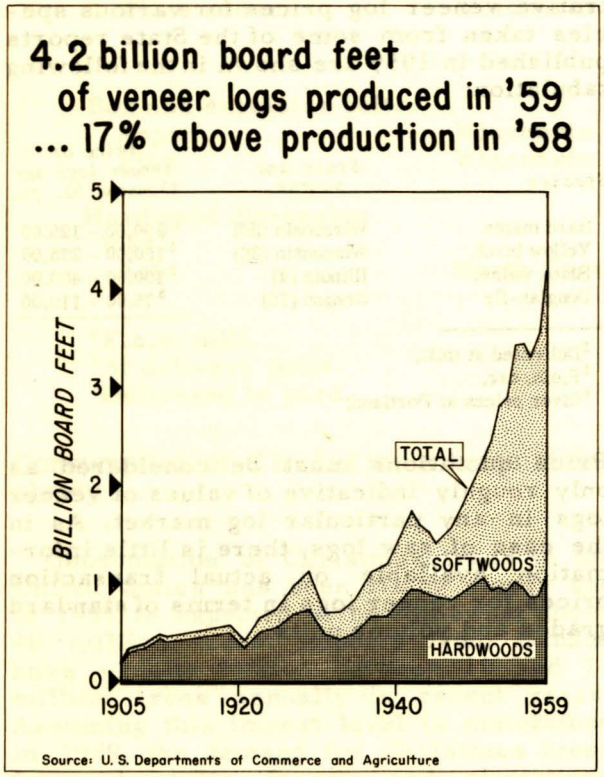

Figure 15

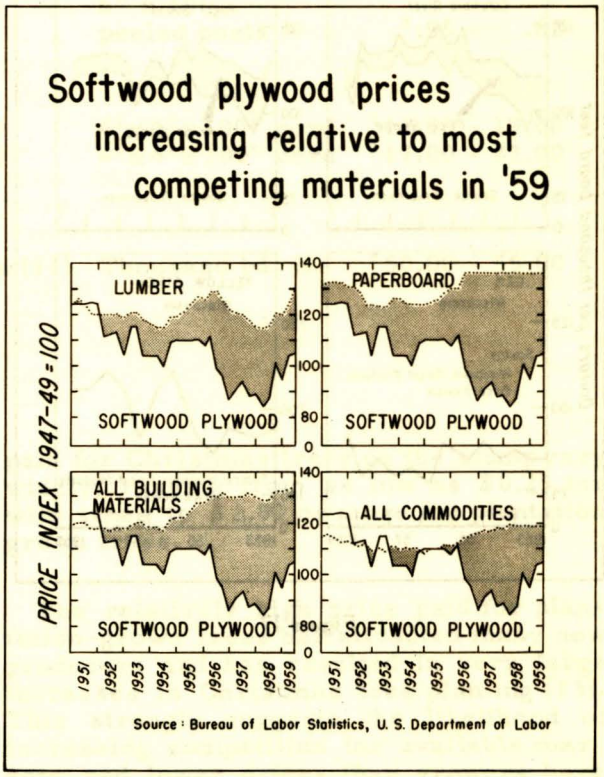

Figure 16

feet. This presumably reflects in part a growing scarcity of high-quality domestic hardwoods since demands for hardwood veneer and plywood have continued to increase. Such increases have been met by imports, chiefly from Japan and Canada.

For raw material the hardwood veneer and plywood industry, which embraces about 500 mills located in the East, depends upon gum, birch, yellow-poplar, and a wide variety of other hardwood species.

Veneer log price quotations show little change

In July 1959, price quotations for Douglas-fir No. 1 peeler logs ranged between $111 and $116 in the Puget Sound log market and from $108 to $113 in the Columbia River market (15). This general level has been reported without significant change during the last 3 or 4 years (fig. 17).

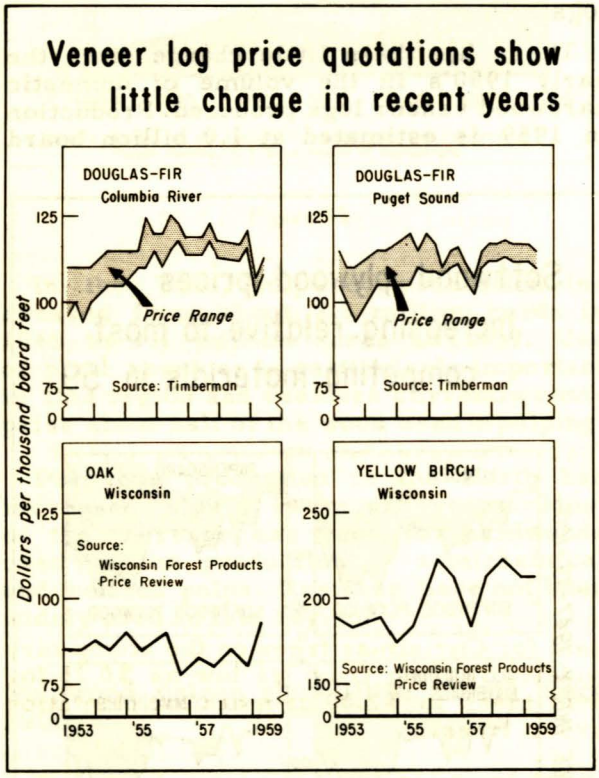

Figure 17

Current prices, however, are more than three times as high as in 1940. Price increases for peeler logs reflects the spectacular growth of the softwood plywood industry and the consequent increased demands for high-grade logs, rising log production costs, and increased stumpage prices resulting from a gradual decline in the availability of high-quality, old-growth timber. Improvement in technology which has permitted the efficient use of lower grade logs has been an offsetting factor in this price increase.

Prices for hardwood veneer logs have also been relatively stable in recent years although prices by grades and species vary widely (fig. 17). Price reports for black walnut, veneer logs, for example, show current averages of about $238 f.o.b. car in Illinois, whereas sweetgum and yellow-poplar logs used in the manufacture of veneer for baskets, berry boxes, and other containers average about $57 delivered at mill (4).

Several States publish reports which contain price quotations for veneer logs (1, 3, 4, 5, 10, 11, 12, 14, 28, 29, 30). Illustrative veneer log prices for various species taken from some of the State reports published in 1959 are shown in the following tabulation:

Species	*State and source*	*Price of veneer logs per thousand bd. ft.*
Hard maple	Wisconsin (30)	[1] $90.00 - 125.00
Yellow birch	Wisconsin (30)	[1] 150.00 - 275.00
Black walnut	Illinois (4)	[2] 100.00 - 400.00
Douglas-fir	Oregon (12)	[3] 75.00 - 110.00

[1] Delivered at mill.
[2] F.o.b. car.
[3] River prices at Portland.

Price quotations must be considered as only roughly indicative of values of veneer logs in any particular log market. As in the case of saw logs, there is little information available on actual transaction prices for veneer logs in terms of standard grades and volume units.

THE DEMAND AND PRICE OUTLOOK FOR OTHER ROUNDWOOD PRODUCTS

Production of other industrial roundwood products shows variable trends

Production of industrial roundwood products such as cooperage logs, poles and piling, fence posts, hewn ties, round mine timbers, and a miscellaneous assortment of other products amounted to an estimated 730 million cubic feet in 1959, or about 8 percent of the industrial roundwood produced. Past trends in the production of these products have been variable, some increasing and others decreasing. In total, however, there has not been much change in the level of production in recent years.

Scattered price information is available for a number of these miscellaneous industrial products. Illustrative recent price quotations for selected products and species are shown in the following tabulation:

Product	*State & source*	*Unit of measure*	*Price*
Poles:			
Southern pine	Louisiana (6)	30 ft. poles	[1]$2.65 - 3.50
		50 ft. poles	[1]14.45 - 19.35
		70 ft. poles	[1]42.15 - 54.95
White cedar	Wisconsin (30)	30 ft. poles	[2] 4.25 - 7.00
Piling:			
Jack and Norway Pine	Wisconsin (30)	lineal foot in 50 ft. lengths	[2] .40 - .45
Posts:			
White cedar	Wisconsin (30)	6" x 10' peeled posts	[3] .55 - .62
Box and excelsior bolts:			
Aspen	Wisconsin (30)	4'x4'x100" cord	[1]12.00 - 19.00
Pine	Wisconsin (30)	4'x4'x100" cord	[1]17.00 - 22.00
Hardwood dimension logs:			
Ash	North Carolina (11)	Thousand bd. ft.	[2]50.00 - 55.00

[1]F.o.b. mill.
[2]At delivery point.
[3]Delivered to yard.

Consumption of Christmas trees rising slowly

Consumption of Christmas trees in the United States has been rising slowly and in 1959 is expected to be somewhat above 40 million trees. Imports from Canada have usually totaled between 10 and 12 million trees annually in recent years. Assuming this import level is maintained in 1959, the demand for Christmas trees from domestic forests and plantations should be near 30 million trees. Prices paid for Christmas trees on the stump vary widely, ranging from as low as $0.25 for wild trees to $2.00 or more for plantation grown trees.

The relatively high price paid for plantation-grown trees has attracted many new producers and has resulted in very large increases in Christmas tree planting (13). This strongly suggests the likelihood of increasing competition for available markets and lower prices than growers have been receiving.

THE DEMAND AND PRICE OUTLOOK FOR NAVAL STORES

Domestic production in 1959

Not much change in rosin production (about 1,850,000 drums) and a 2 percent increase in turpentine output (about 620,000 barrels) is expected in the 1959 crop year. This halts a downward trend in turpentine production which started in 1956. Rosin output attained a plateau after decreases in 1957 and 1958. However, lower rosin production is anticipated in 1960. This year, increased production of sulfate wood turpentine and of tall oil rosin is expected to offset the decreased output of gum and steam distilled wood naval stores (tables 11 and 12).

Shift in output sources expected to accelerate

In the next few years, lower rosin production and not much change in turpentine output appears to be the pattern. However, the shift in output sources is likely to increase--away from naval stores steam distilled from wood and toward naval stores recovered as a by-product of the kraft paper industry. Moreover, as crude pine gum prices edge higher in response to increased rosin demand and prices, it is likely that the long-term downtrend in production of gum naval stores will be reversed. During the current crop year rosin production will divide percentagewise about 19-62-19 among gum, steam distilled, and sulfate sources. The corresponding proportion of turpentine output is 18-26-56. Future percentages should be lower for steam distilled sources and higher for sulfate and gum sources.

Rosin production in the 1960 crop year is expected to be the lowest since 1953 because of an estimated 8 percent decrease in the steam distilled output from 1959 levels. This decrease is not likely to be fully offset by increased output of other types. Further substantial declines in output of steam distilled rosin are anticipated in subsequent years. By 1965, judging from reports of available first growth pine stumpwood, production may be about half of current output. The major steam distilled producers have invested in alternate sources of naval stores and are planning further investments.

Tall oil rosin is unlikely to fill the supply vacuum resulting from the expected decline in the production of steam distilled wood rosin during the next several years. Among the limiting factors are supplies of softwood sulfate pulp, tall oil fractionating capacity, and the tendency of increased tall oil rosin supplies and expanded paper size requirements to go hand in hand.

Output of softwood sulfate pulp is expected to increase an average of about 6 to 7 percent annually over the next several years.[3] Meanwhile, planned expansion in tall oil fractionating capacity should increase the potential for tall oil rosin output about 10 percent annually over the next 2 years. Such annual increases will fall far short of meeting the expected decreases in steam distilled rosin production of about 100,000 drums annually for the next few years. Moreover, a large part of the added potential output of crude tall oil generated by greater utilization of softwood pulp is offset in its effect on the rosin market by the accompanying increase in rosin size requirements.

The greatest potential for expansion lies in pine gum farming. Growth in this segment of the industry offers the most hope in closing the progressively widening gap between demand and output. If the substantially higher prices expected for rosin are translated into proportionately higher crude gum prices to gum farmers, it is likely that gum production will increase for the first time since 1949. A start in this direction is being made in the Southwest, where gum farming operations are scheduled to begin in 1960.

Steep decline in rosin stocks expected

Rosin carryout stocks next March 31 are likely to be less than half those of the previous year. They will be at their lowest level in 12 years. This will reflect a 70 percent reduction in CCC stocks (about 350,000 drums) during the year. A further reduction is expected the following year with liquidation of CCC stocks probably completed. About 1% of the gum rosin crop

[3] Based on projections of pulp and paper supplies by the Business and Defense Services Administration, U.S. Department of Commerce, House Report No. 671, July 15, 1959.

probably will be placed in the 1959 loan and redeemed before the deadline for redemptions next July 1.

Despite sale of all CCC turpentine stocks during the early months of the crop year, no significant change is expected in total stocks of turpentine next March 31. About 4 percent of gum turpentine production probably will be pledged to the 1959 loan and, as in the case of rosin, redeemed and sold by next July 1.

Rosin requirements near record levels

Domestic and export disappearance of rosin has exceeded production (including imports) each crop year beginning with 1953. This disparity has come to a sudden peak in 1959 (fig. 18) and probably will continue extreme for at least another year. This situation reflects the greatest overall requirement for rosin since 1950 and an increase of about 17 percent over 1957 and 1958 levels.

Through August 1959, domestic consumption of rosin was 29 percent greater than for the same period last year. This relative increase is unlikely to be maintained for the entire crop year since consumption accelerated during the latter part of the 1958 crop year. For the current crop year as a whole, domestic disappearance is expected to approximate 1,578,000 drums, about 15 percent above last year. If this figure is reached, it will be an alltime high.

The high level of rosin consumption in 1959 reflects an estimated 10 percent increase in paper and board production, a probable increase of 25 percent in the output of S-type synthetic rubber, and greatly increased usage in polystyrene plastics. Production of the latter has been rising each year since 1954 and in 1959 is expected to have increased 35 percent. Further substantial increases in these commodities are anticipated in the years ahead. For example, by 1965 a further increase of about 30 percent is likely in paper and board production. Similarly, further increases averaging about 10 percent annually are estimated in the production of polystyrene plastics for the next several years. Accordingly, the outlook is for continuance of the rising trend in rosin consumption over the next few years.

Rosin exports higher in 1959

Rosin exports from April through August, 1959, are 30 percent higher than for the corresponding period a year ago. For the entire 1959 crop year, exports are estimated at about 620,000 drums (22% above the previous year) and are likely to be the highest since 1954. Increased rosin exports have developed despite greater production in Western Europe and in Mexico. They reflect (a) increased foreign consumption, including Communist Bloc countries, and (b) the virtual disappearance of China as a major supplier of rosin to countries outside the Iron Curtain.

In the next few years however, reduced U.S. production and stocks and expanding domestic requirements are expected to restrict the volume of rosin available for export. Although naval stores production is reported to be increasing in the Soviet Bloc, consumption in these countries apparently is rising at an even greater rate. No appreciable increase in output is expected elsewhere in the next few years. Consequently, the outlook during this period is for an excess of import requirements over export availabilities.

Not much change in domestic consumption of turpentine

Domestic consumption of turpentine is not likely to change much in 1959. Industrial consumption of turpentine, however, has been increasing at the expense of retail sales in small containers (fig. 19). The trend to industrial use of turpentine began in 1948. At that time only 20 percent of the turpentine used in this country was consumed by industry, but during the 1958 crop year industry used 72 percent of the turpentine consumed. The principal industrial uses for turpentine are:

1. Synthetic pine oil. Currently, synthetic pine oil accounts for about 30% of the total output of pine oil.

2. Insecticides (toxaphene and other chlorinated hydrocarbons). This market recently appeared threatened by reported development of insect resistance in some areas. However, insect resistance apparently has been overcome and consumption has been increasing this year.

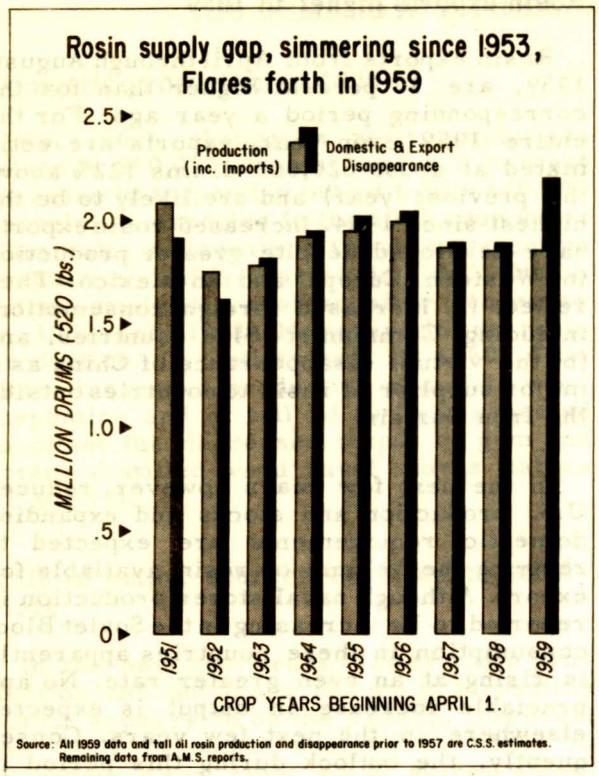

Figure 18

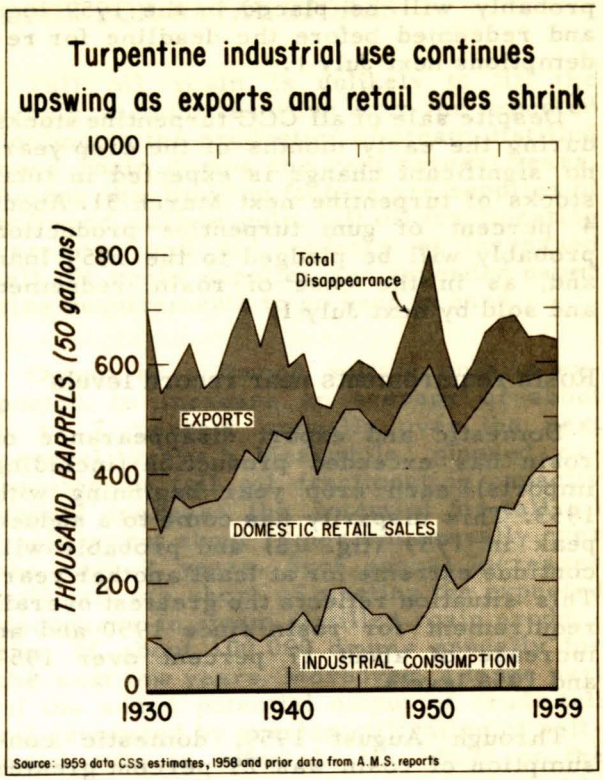

Figure 19

3. Synthetic Resin. New uses for turpentine have been found in synthetic resins, including one for plastics. The future of this market appears good for a long time, and turpentine utilization is likely to increase.
4. Synthetic Camphor. This market for turpentine has seen its best days. Markets remain in Europe, but domestic use of camphor as a plasticizer for synthetic plastics is declining.
5. Oil Additives. Turpentine usage in oil additives has been declining and is no longer significant.

Turpentine exports lower in 1959

Turpentine exports are likely to be at least 10 percent lower in 1959 than in 1958. No significant change is expected in the next few years.

Higher prices in prospect

Prices of gum rosin and gum turpentine in the 1959 crop year are expected to be about 12 and 4 percent higher, respectively, than a year ago. Although little change is expected in the price of turpentine in subsequent years, continued increase is expected in the price of rosin. However, rosin remains a relatively inexpensive chemical raw material. Both rosin and turpentine prices are above loan value (figs. 20 and 21). Rosin prices now are increasing at a greater rate than the industrial chemical price index, although during the past decade they generally followed the trend in prices for other industrial chemicals.

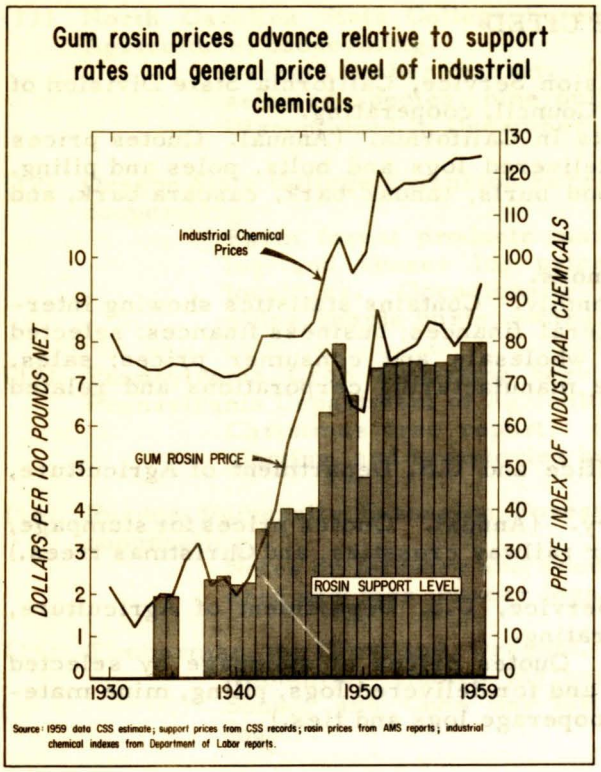

Figure 20

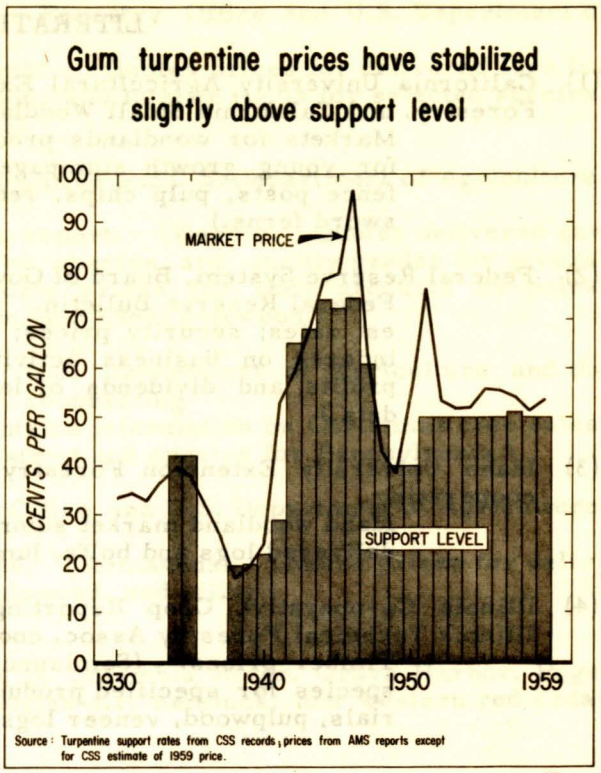

Figure 21

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TABLE 1.--Trends in gross national product, expenditures for new construction, number of new nonfarm housing starts, population and industrial production in the United States, 1929-1959

Year and quarter	Gross national product (1958 prices)	Expenditures for new construction	No. of new nonfarm housing starts	Population	Index of industrial production
	Billion dollars	*Million dollars*	*Thousand units*	*Millions*	*1947-49=100*
1929	201.0	10,793	509	121.8	59
1930	182.0	8,741	330	123.1	49
1931	168.3	6,427	254	124.0	40
1932	143.1	3,538	134	124.8	31
1933	139.5	2,879	93	125.6	37
1934	152.9	3,720	126	126.4	40
1935	168.3	4,232	221	127.2	47
1936	191.7	6,497	319	128.1	56
1937	202.5	6,999	336	128.8	61
1938	192.8	6,980	406	129.9	48
1939	208.8	8,198	515	130.9	58
1940	227.0	8,682	603	132.1	67
1941	264.1	11,957	706	133.4	87
1942	299.4	14,075	356	134.9	106
1943	335.7	8,301	191	136.7	127
1944	360.0	5,259	142	138.4	125
1945	354.1	5,809	209	139.9	107
1946	312.2	12,737	671	141.4	90
1947	311.8	17,915	849	144.1	100
1948	323.7	23,222	932	146.6	104
1949	324.0	24,163	1,025	149.2	97
1950	351.6	29,955	1,396	151.7	112
1951	379.6	32,739	1,091	154.4	120
1952	393.3	34,750	1,127	157.0	124
1953	411.1	37,118	1,104	159.6	134
1954	403.2	39,601	1,220	162.4	125
1955	435.4	44,581	1,329	165.3	139
1956	446.1	46,292	1,118	168.2	143
1957[1]	451.1	47,795	1,042	171.2	143
First quarter	452.4	48,232	943	170.3	145
Second quarter	453.7	48,048	984	171.0	144
Third quarter	453.3	48,184	1,028	171.8	145
Fourth quarter	444.4	49,912	1,010	172.5	139
1958[1]	436.7	49,109	1,209	174.1	134
First quarter	427.7	48,112	951	173.2	130
Second quarter	429.0	47,320	1,026	173.8	129
Third quarter	438.6	48,708	1,219	174.6	136
Fourth quarter	451.5	52,020	1,387	175.4	140
1959[1 2]	--	--	--	--	--
First quarter	470.2	54,992	1,390	176.2	145
Second quarter	485.0	55,400	1,367	176.9	153

[1] Except population, data shown by quarters are seasonally adjusted annual rates. Expenditures for new construction, number of new nonfarm housing starts, and the index of industrial production are 3-month averages. Population figures are for the month ending each quarter.

[2] Preliminary estimates.

Source: Gross national product and index of industrial production 1929-4th quarter 1958, expenditures for new construction and number of new nonfarm housing starts 1929-1956 Economic Report of the President, January 1959. Gross national product and index of industrial production 1st and 2nd quarters 1959, Board of Governors, Federal Reserve System (2); expenditures for new construction and number of new nonfarm housing starts 1957-2nd quarter 1959, U.S. Departments of Commerce and Labor (24). Population, Bureau of Census, U.S. Department of Commerce.

TABLE 2. --Estimated production, net imports, and new supply of timber products in the United States, 1900-1959

(Million cubic feet, roundwood equivalent)

Year	Total domestic production	Total new supply	Industrial roundwood[1]														Fuelwood[2]
			Total			Saw logs			Veneer logs			Pulpwood			Other products[3]		
			Domestic production	Net imports	New supply[4]	Domestic production	Net imports[5]	New supply[4 6]	Domestic production	Net imports[7]	New supply[4]	Domestic production	Net imports[8]	New supply[4 9]	New supply		New supply
1900.....	12,085	11,940	7,285	* 140	7,140	5,680	* 175	5,505	5	--	5	135	35	170	1,460		4,800
1901.....	12,230	12,120	7,580	* 110	7,470	5,930	* 150	5,780	5	--	5	150	40	190	1,490		4,650
1902.....	12,380	12,320	7,880	* 60	7,820	6,180	* 110	6,070	10	--	10	160	50	210	1,525		4,500
1903.....	12,565	12,425	8,215	* 140	8,075	6,445	* 195	6,255	15	--	15	175	55	230	1,575		4,350
1904.....	12,690	12,540	8,490	* 150	8,340	6,675	* 205	6,470	20	--	20	190	60	250	1,600		4,200
1905.....	12,675	12,585	8,625	* 90	8,535	6,755	* 155	6,600	35	--	35	195	65	260	1,640		4,050
1906.....	13,125	13,030	9,225	* 95	9,130	7,145	* 170	6,975	60	--	60	225	75	300	1,800		3,900
1907.....	13,380	13,265	9,555	* 115	9,440	7,145	* 215	6,930	65	--	65	235	100	335	2,110		3,825
1908.....	12,700	12,620	8,725	* 80	8,645	6,520	* 160	6,360	70	--	70	205	80	285	1,930		3,975
1909.....	13,100	13,050	9,275	* 50	9,225	6,910	* 155	6,760	80	--	80	230	105	335	2,050		3,825
1910.....	13,205	13,125	9,295	* 80	9,215	6,910	* 215	6,695	90	--	90	220	135	355	2,075		3,910
1911.....	13,055	12,905	9,020	* 150	8,870	6,680	* 290	6,385	80	--	80	240	140	380	2,020		4,035
1912.....	13,090	12,945	9,330	* 145	9,185	6,990	* 295	6,695	80	--	80	250	150	395	2,015		3,760
1913.....	12,950	12,785	9,170	* 165	9,005	6,835	* 320	6,510	80	--	80	260	155	415	1,995		3,780
1914.....	12,540	12,525	8,565	* 15	8,550	6,290	* 185	6,110	85	--	85	265	170	435	1,925		3,975
1915.....	11,995	12,125	8,020	130	8,150	5,750	* 35	5,715	85	--	85	300	170	465	1,885		3,975
1916.....	12,485	12,650	8,530	165	8,695	6,185	* 10	6,175	90	--	90	325	175	500	1,930		3,955
1917.....	11,980	12,150	7,940	170	8,110	5,570	5	5,575	90	--	90	345	165	515	1,930		4,040
1918.....	11,600	11,780	7,310	180	7,490	4,955	20	4,975	95	--	95	335	160	500	1,920		4,290
1919.....	11,800	11,925	7,725	125	7,850	5,370	* 55	5,315	105	--	105	330	180	510	1,915		4,075
1920.....	11,855	12,050	7,790	195	7,985	5,440	* 55	5,380	80	--	80	375	250	630	1,890		4,065
1921.....	10,850	11,000	6,580	145	6,730	4,505	* 80	4,430	75	--	75	285	225	510	1,720		4,270
1922.....	11,365	11,655	7,605	295	7,895	5,480	* 60	5,420	90	--	90	340	355	695	1,695		3,760
1923.....	11,920	12,260	8,545	340	8,885	6,375	* 75	6,295	115	--	115	350	415	765	1,705		3,375
1924.....	11,640	11,915	8,260	270	8,535	6,140	* 155	5,980	115	--	115	355	425	780	1,655		3,380
1925.....	11,605	11,935	8,380	330	8,710	6,375	* 120	6,255	135	--	135	375	450	825	1,495		3,225
1926.....	11,290	11,665	8,225	370	8,600	6,180	* 145	6,035	145	--	145	415	515	930	1,490		3,065
1927.....	11,005	11,320	7,805	315	8,120	5,790	* 205	5,585	175	(10)(*)	170	405	520	925	1,435		3,200
1928.....	10,915	11,195	7,690	280	7,970	5,710	* 275	5,435	175	* 5	175	415	555	975	1,385		3,225
1929.....	11,220	11,545	8,050	325	8,375	6,020	* 255	5,765	200	* 5	195	455	585	1,040	1,380		3,170
1930.....	10,135	10,505	6,345	375	6,715	4,560	* 175	4,385	155	* 5	150	430	555	985	1,195		3,790
1931.....	9,015	9,340	4,625	325	4,950	3,105	* 150	2,960	125	* 5	120	420	475	895	970		4,390
1932.....	8,375	8,690	3,395	315	3,710	2,100	* 120	1,980	120	(10)(*)	115	345	435	785	830		4,980
1933.....	9,050	9,395	4,045	345	4,390	2,665	* 145	2,520	125	* 5	120	425	490	915	835		5,005
1934.....	9,180	9,520	4,355	345	4,695	2,925	* 165	2,760	130	* 5	125	445	510	960	855		4,825
1935.....	9,605	10,230	5,095	425	5,720	3,565	* 135	3,630	145	* 5	140	485	565	1,050	895		4,510
1936.....	10,255	10,610	5,990	560	6,345	4,295	* 95	3,995	165	* 5	160	555	660	1,215	975		4,265
1937.....	10,445	10,680	6,370	610	6,605	4,505	* 115	4,015	195	* 5	195	645	730	1,375	1,020		4,075
1938.....	9,895	10,260	5,570	475	5,935	3,860	* 70	3,680	195	(10)(*)	195	595	540	1,140	920		4,325
1939.....	10,565	11,100	6,375	535	6,910	4,470	* 60	4,410	210	(10)(*)	210	730	595	1,325	965		4,190
1940.....	10,865	11,800	6,975	400	7,910	4,845	* 35	5,340	235	* 5	230	935	440	1,375	965		3,890
1941.....	11,645	12,155	8,050	650	8,560	5,680	105	5,630	265	* 5	260	1,075	550	1,645	1,030		3,595
1942.....	10,950	12,700	8,085	720	9,835	5,645	170	6,830	305	* 5	300	1,135	555	1,710	1,000		2,865
1943.....	10,345	11,555	7,560	575	8,770	5,325	85	6,020	280	* 15	265	1,030	505	1,565	920		2,785
1944.....	10,370	11,080	7,455	560	8,165	5,115	100	5,385	270	* 10	260	1,165	470	1,615	905		2,915
1945.....	9,580	10,535	6,605	680	7,560	4,365	100	4,745	250	* 10	240	1,140	590	1,730	845		2,975
1946.....	10,380	10,915	7,705	810	8,240	5,295	90	5,200	255	* 5	250	1,260	720	1,895	890		2,675
1947.....	10,775	11,290	8,090	815	8,605	5,500	* 5	5,260	275	* 5	265	1,375	825	2,135	940		2,685
1948.....	11,030	11,725	8,365	1,080	9,060	5,750	190	5,645	290	(10)	295	1,475	885	2,275	850		2,665
1949.....	10,160	11,355	7,340	935	8,535	5,000	140	5,345	320	(10)	320	1,275	790	2,120	745		2,820
1950.....	10,795	12,235	8,525	1,385	9,965	5,905	455	6,330	345	10	350	1,500	925	2,510	770		2,270
1951.....	10,960	11,945	8,730	1,205	9,715	5,780	235	5,895	395	10	405	1,830	955	2,690	730		2,230
1952.....	10,775	11,915	8,750	1,160	9,890	5,820	275	6,140	420	10	430	1,810	875	2,620	700		2,025
1953.....	10,905	12,020	8,835	1,225	9,950	5,710	330	5,915	475	20	500	1,895	870	2,785	750		2,070
1954.....	10,815	12,130	8,810	1,195	10,125	5,650	365	6,070	490	35	520	1,930	795	2,795	740		2,005
1955.....	11,180	12,530	9,340	1,295	10,690	5,810	430	6,250	575	45	625	2,175	820	3,035	780		1,840
1956.....	11,515	12,640	9,685	1,375	10,810	5,935	420	6,210	580	50	630	2,440	905	3,240	730		1,830
1957[11].....	10,670	11,895	8,930	1,190	10,155	5,375	335	5,780	555	55	610	2,320	800	3,085	680		1,740
1958[11].....	10,235	11,580	8,530	1,230	9,875	5,125	415	5,600	595	60	655	2,140	755	2,950	670		1,705
1959[11].....	11,165	12,495	9,490	1,360	10,820	5,750	530	6,225	700	65	765	2,310	765	3,100	730		1,675

[1] Includes all products, except fuelwood, commonly cut from round sections of trees.
[2] Includes small quantities of imported fuelwood.
[3] Includes cooperage logs, poles and piling, fence posts, hewn ties, round mine timbers, box bolts, excelsior bolts, chemical wood, shingle bolts, and a miscellaneous assortment of similar items.
[4] Columns may not add to total because of rounding.
[5] Net imports of lumber converted to cubic feet roundwood. Small quantities of imported saw logs (roundwood form) are included under domestic production.
[6] Includes changes in stocks beginning in 1935.
[7] Net imports of veneer logs represent the equivalent net imports of veneer and plywood converted to board feet log scale, and then to cubic feet roundwood. The small volume of veneer logs imported (roundwood form) are included under domestic production.
[8] Includes net pulpwood imports (in roundwood form) and the pulpwood equivalent of the net woodpulp and paper and paperboard imports.
[9] Includes changes in stocks beginning in 1941.
[10] Less than 2.5 million cubic feet.
[11] Preliminary estimates.

* Net exports.

Source: Based on data published by the Departments of Commerce and Agriculture and estimates of the Forest Service.

TABLE 3. --Stumpage prices for selected species, 1910-1959

(Dollars per thousand board feet)

Year and quarter	Douglas-fir[1]	Southern pine[2]	Sugar pine[3]	Ponderosa pine[3]
1910	2.20	1.50	4.30	3.60
1911	2.30	2.80	2.50	2.50
1912	2.30	1.50	3.50	2.70
1913	1.70	1.70	3.30	2.20
1914	1.60	2.90	3.00	2.00
1915	2.90	2.10	3.40	2.50
1916	1.20	3.20	3.50	2.90
1917	1.60	3.40	2.80	2.20
1918	1.80	3.00	3.40	2.70
1919	2.40	3.70	3.40	3.00
1920	1.80	4.40	5.00	3.70
1921	1.90	3.70	4.20	3.20
1922	2.50	2.80	3.80	4.00
1923	2.50	3.00	4.40	3.90
1924	2.20	3.50	4.20	3.50
1925	2.10	3.20	4.40	3.60
1926	2.20	3.60	4.50	3.70
1927	2.50	3.50	4.00	3.40
1928	2.90	3.60	3.20	2.50
1929	2.70	3.50	4.60	3.60
1930	3.30	3.20	6.30	3.60
1931	2.90	3.40	4.60	4.20
1932	1.70	2.80	3.70	2.60
1933	1.20	2.70	--	--
1934	1.50	2.90	3.50	2.50
1935	1.70	4.50	3.10	2.40
1936	2.10	--	2.80	2.20
1937	1.60	5.30	2.80	2.20
1938	2.50	7.30	3.50	2.50
1939	--	5.80	3.10	2.40
1940	2.30	4.50	3.00	2.20
1941	3.60	10.80	3.40	2.60
1942	--	8.90	4.80	2.70
1943	--	8.70	4.20	5.00
1944	5.20	10.90	5.20	4.00
1945	5.00	9.30	7.30	5.60
1946	6.60	8.90	7.20	5.80
1947	9.90	10.90	12.50	8.30
1948	19.90	16.40	16.20	14.60
1949	11.10	19.70	18.90	17.60
1950	16.40	26.70	25.00	18.30
1951	25.40	34.60	40.40	33.60
1952	25.80	38.50	36.40	27.40
1953	20.20	34.20	30.20	25.90
1954	16.20	29.70	31.20	27.20
1955	28.90	32.00	30.00	26.10
1956	37.70	37.40	34.90	27.20
1957	26.20	31.50	30.00	24.20
1958 - First quarter	21.50	30.30	25.00	22.60
Second quarter	20.60	30.60	30.30	14.70
Third quarter	22.20	32.30	21.80	19.00
Fourth quarter	24.30	32.10	21.20	18.30
1959 - First quarter	35.40	34.00	27.70	22.00
Second quarter	38.40	35.40	24.50	19.20

[1] 1910-31 national-forest timber sales, all species Washington and Oregon; 1932-41 all species western Washington and western Oregon; 1944-56, national-forest and Bureau of Land Management sales Douglas-fir only in western Washington and western Oregon; 1957-59 national-forest sales, Douglas-fir only in western Washington and western Oregon. All U. S. Forest Service national-forest prices in this table are the bid prices for timber sold on a Scribner C log scale basis, including Knutsen-Vandenberg Act deposits for stand improvement but excluding cooperative deposits and slash-disposal payments.

[2] 1910-34 stumpage prices of privately owned second-growth southern pine timber, 1935-49 national-forest timber sales all species; 1950-59 national-forest timber sales pine only.

[3] 1910-59 national-forest timber sales, California.

TABLE 4.--Lumber production, imports, exports, and consumption in the United States, for selected years 1899-1959

Year	Domestic production	Imports	Exports	Stock changes	Apparent consumption	Per capita consumption
	Billion board feet	*Billion board feet*	*Billion board feet*	*Billion board feet*	*Billion board feet*	*Board feet*
1899	35.1	0.7	1.5	--	34.3	458
1905	43.5	.8	1.8	--	42.5	507
1910	44.5	1.0	2.3	--	43.2	468
1915	37.0	1.1	1.3	--	36.8	366
1920	35.0	1.4	1.7	--	34.7	326
1925	41.0	1.8	2.6	--	40.2	347
1930	29.4	1.2	2.4	--	28.2	229
1931	20.0	.7	1.7	--	19.0	153
1932	13.5	.4	1.2	--	12.7	102
1933	17.2	.4	1.3	--	16.3	130
1934	18.8	.3	1.3	--	17.8	141
1935	22.9	.4	1.3	-1.3	23.3	183
1936	27.6	.7	1.3	1.3	25.7	201
1937	29.0	.7	1.4	2.4	25.9	201
1938	24.8	.5	1.0	.7	23.6	182
1939	28.8	.7	1.1	--	28.4	217
1940	31.2	.7	1.0	-3.4	34.3	260
1941	36.5	1.4	.7	1.0	36.2	271
1942	36.3	1.5	.5	-6.5	43.8	325
1943	34.3	.9	.3	-3.9	38.8	284
1944	32.9	1.0	.4	-1.1	34.6	250
1945	28.1	1.1	.4	-1.8	30.6	219
1946	34.1	1.2	.6	1.2	33.5	237
1947	35.4	1.3	1.4	1.5	33.8	235
1948	37.0	1.9	.6	1.9	36.4	248
1949	32.2	1.6	.7	-1.3	34.4	231
1950	38.0	3.4	.5	.2	40.7	268
1951	37.2	2.5	1.0	.8	37.9	245
1952	37.5	2.5	.7	-.3	39.6	252
1953	36.7	2.8	.6	.8	38.1	239
1954	36.4	3.1	.7	-.4	39.2	241
1955	37.4	3.6	.8	-.1	40.3	244
1956	38.2	3.4	.8	.9	39.9	237
1957	34.6	3.0	.8	-.5	37.3	218
1958[1]	33.0	3.4	.7	-.4	36.1	207
1959[1]	37.0	4.2	.8	+.3	40.1	226

[1] Preliminary estimates.

Source: Bureau of the Census, U.S. Department of Commerce (21); Forest Service, U.S. Department of Agriculture

Note. Estimates of lumber production in 1958 and 1959 are based on data published by the National Lumber Manufacturers Association (8, 9).

TABLE 5. --Estimated lumber production in the United States, by regions and by hardwoods and softwoods, selected years 1899-1959[1]

Year	All regions			North			South			West, total[2]
	Total	Hardwoods	Softwoods	Total	Hardwoods	Softwoods	Total	Hardwoods	Softwoods	
	Billion board feet	*Billion board feet*	*Billion board feet*	*Billion board feet*	*Billion board feet*	*Billion board feet*	*Billion board feet*	*Billion board feet*	*Billion board feet*	*Billion board feet*
1899	35.1	8.9	26.2	18.6	6.6	12.0	12.9	2.3	10.7	3.5
1905	43.5	10.5	33.0	20.1	7.3	12.8	16.5	3.3	13.3	6.9
1910	44.5	10.5	34.0	15.6	7.5	8.0	20.0	2.9	17.1	8.9
1915	37.0	7.5	29.5	10.0	4.7	5.3	18.8	2.8	16.0	8.2
1920	35.0	7.4	27.6	6.9	3.8	3.0	16.0	3.5	12.5	12.1
1925	41.0	7.7	33.3	6.0	3.6	2.5	19.6	4.1	15.5	15.3
1930	29.4	6.1	23.2	4.5	2.9	1.6	12.6	3.2	9.4	12.2
1935	22.9	4.7	18.2	3.8	2.4	1.5	10.0	2.3	7.7	9.1
1940	31.2	5.5	25.6	4.6	2.9	1.7	13.3	2.6	10.7	13.2
1941	36.5	6.7	29.9	5.3	3.3	2.0	15.5	3.3	12.2	15.7
1942	36.3	6.8	29.5	5.1	3.2	2.0	15.6	3.6	12.0	15.6
1943	34.3	7.4	26.9	4.9	3.2	1.7	14.3	4.2	10.2	15.0
1944	32.9	7.8	25.2	5.4	3.5	1.9	12.6	4.3	8.3	15.0
1945	28.1	7.0	21.1	4.5	2.8	1.7	11.5	4.1	7.4	12.1
1946	34.1	8.3	25.9	4.9	3.1	1.9	14.7	5.1	9.6	14.4
1947	35.4	7.4	28.0	5.4	3.4	2.0	13.6	4.0	9.6	16.3
1948	37.0	7.4	29.6	6.0	3.4	2.6	13.2	4.0	9.2	17.8
1949	32.2	5.7	26.5	4.1	2.6	1.5	11.6	3.1	8.5	16.5
1950	38.0	7.4	30.6	4.9	3.0	2.0	14.6	4.4	10.2	18.6
1951	37.2	7.7	29.5	5.0	3.3	1.7	13.3	4.4	8.9	18.9
1952	37.5	7.2	30.3	4.1	2.7	1.4	13.7	4.5	9.2	19.7
1953	36.7	7.2	29.5	5.0	3.5	1.5	11.8	3.7	8.1	19.9
1954	36.4	7.1	29.3	4.6	3.0	1.7	11.7	4.1	7.7	20.0
1955	37.4	7.6	29.8	4.5	3.1	1.5	12.1	4.5	7.7	20.7
1956	38.2	8.0	30.2	4.9	3.2	1.7	12.8	4.7	8.2	20.5
1957	34.6	7.5	27.1	4.7	3.3	1.4	11.1	4.1	7.0	18.8
1958[3]	33.0	6.9	26.1	4.4	2.9	1.5	10.8	4.0	6.8	17.8
1959[3]	37.0	7.6	29.4	4.9	3.2	1.7	12.1	4.4	7.7	20.0

[1] Data may not add to total because of rounding.
[2] Practically all softwoods.
[3] Preliminary estimates.

Source: Bureau of the Census, U.S. Department of Commerce (21); Forest Service, U.S. Department of Agriculture.

Note. Estimates for 1958 and 1959 are based on data published by the National Lumber Manufacturers Association (8, 9).

TABLE 6.--Wholesale price indexes for lumber, all commodities and selected construction materials, 1929-1959

(1947-49 = 100)

Year and month	Lumber	Structural steel	Paper-board	Structural clay products[1]	Construction materials	All commodities	Plywood
1929	31.2	61.6	44.5	61.8	49.7	61.9	--
1930	28.5	54.8	37.3	58.8	46.8	56.1	--
1931	23.1	52.2	31.6	54.8	41.2	47.4	--
1932	19.4	50.8	31.4	50.6	37.2	42.1	--
1933	23.5	52.2	41.2	51.9	40.1	42.8	--
1934	28.1	57.0	47.4	59.1	44.9	48.7	--
1935	27.2	57.8	41.4	58.6	44.4	52.0	--
1936	28.9	59.7	41.5	58.1	45.1	52.5	--
1937	33.1	71.1	48.9	61.2	49.6	56.1	--
1938	29.0	69.7	41.4	59.6	47.0	51.1	--
1939	31.0	67.4	42.5	59.9	47.1	50.1	--
1940	34.2	67.4	48.6	59.3	49.4	51.1	--
1941	40.7	67.4	54.7	61.4	53.7	56.8	--
1942	44.2	67.4	56.3	64.2	57.4	64.2	--
1943	47.0	67.4	60.6	64.9	58.0	67.0	--
1944	50.9	67.4	62.0	66.6	60.1	67.6	--
1945	51.5	67.4	64.6	73.6	61.3	68.8	--
1946	59.3	74.4	71.2	80.5	69.1	78.7	--
1947	94.5	84.5	99.2	91.7	94.0	96.4	95.9
1948	107.3	102.8	102.0	102.4	104.4	104.4	109.0
1949	98.2	112.6	98.8	105.9	102.0	99.2	95.2
1950	114.5	121.0	105.0	110.2	109.5	103.1	106.5
1951	123.6	128.4	131.8	117.8	119.6	114.8	115.1
1952	120.5	131.1	127.4	122.0	118.2	111.6	105.-
1953	119.3	138.2	124.3	128.1	119.9	110.1	109.3
1954	117.3	143.8	124.5	133.1	120.2	110.3	103.1
1955	124.4	151.9	127.1	140.1	125.5	110.7	105.4
1956	127.2	162.9	134.8	148.0	130.6	114.3	101.7
1957	119.7	187.5	136.3	154.0	130.6	117.6	96.4
January	122.6	179.1	136.2	150.6	130.5	116.9	97.1
February	121.9	183.4	136.2	150.7	130.5	117.0	96.4
March	121.2	183.4	136.2	150.8	130.5	116.9	96.2
April	121.2	183.4	136.2	155.0	130.7	117.2	96.7
May	120.6	183.4	136.2	155.0	130.7	117.1	96.8
June	120.4	183.4	136.2	155.1	130.7	117.4	97.7
July	120.0	192.3	136.2	155.1	131.4	118.2	96.9
August	119.4	192.3	136.2	155.0	131.2	118.4	95.2
September	118.3	192.3	136.2	155.0	130.9	118.0	94.7
October	117.5	192.3	136.6	155.1	130.2	117.8	96.9
November	117.1	192.3	136.6	155.1	130.1	118.1	96.4
December	116.4	193.3	136.6	155.1	130.1	118.5	95.6
1958	118.0	196.0	136.2	156.5	130.5	119.2	97.1
January	116.5	192.3	136.4	155.3	130.3	118.8	95.6
February	116.3	192.3	136.4	155.3	130.1	119.0	93.7
March	115.9	192.3	136.2	155.5	129.4	119.7	92.9
April	115.9	192.3	136.1	155.5	129.0	119.3	94.4
May	116.7	192.3	136.0	155.6	129.2	119.5	92.2
June	116.8	192.3	136.0	155.6	129.5	119.2	94.9
July	116.7	192.3	136.0	155.6	129.6	119.2	98.3
August	119.0	199.6	136.0	155.6	130.6	119.1	100.2
September	121.0	199.6	136.5	158.2	132.0	119.1	102.0
October	120.8	199.6	136.2	158.2	132.1	119.0	102.7
November	120.2	199.6	136.2	158.4	132.0	119.2	100.1
December	120.1	199.6	136.2	158.8	132.0	119.2	99.1
1959							
January	121.0	199.6	136.2	159.3	132.4	119.5	99.7
February	123.1	199.6	136.2	159.6	133.3	119.5	103.6
March	125.5	199.6	136.2	159.9	133.8	119.6	104.0
April	126.8	199.6	136.2	160.0	134.7	120.0	106.6
May	128.9	199.6	136.2	160.1	135.8	119.9	106.6
June	130.4	199.6	136.2	160.4	135.8	119.7	105.2
July	129.9	199.6	135.9	160.6	135.3	119.5	102.4

[1] Formerly listed as "Brick and tile" by the U.S. Department of Labor.

Source: Bureau of Labor Statistics, U.S. Department of Labor (26).

TABLE 7.--Estimated pulpwood production in the United States, by regions and by hardwoods and softwoods, selected years 1899-1959[1]

Year	All regions			North			South			West, total[2]
	Total	Hardwoods	Softwoods	Total	Hardwoods	Softwoods	Total	Hardwoods	Softwoods	
	Million cords	*Million cords*	*Million cords*	*Million cords*	*Million cords*	*Million cords*	*Million cords*	*Million cords*	*Million cords*	*Million cords*
1899	1.6	0.5	1.2	1.4	0.5	1.0	--	--	--	0.2
1905	2.5	.4	2.1	2.5	.4	2.1	0.1	--	0.1	--
1910	3.1	.8	2.3	2.8	.7	2.1	.3	0.1	.1	.1
1916	4.4	.7	3.7	4.2	.6	3.6	.2	.2	.1	--
1920	5.0	.8	4.3	4.5	.5	4.0	.4	.3	.1	.2
1925	5.0	.7	4.3	4.1	.4	3.7	.6	.3	.3	.3
1930	6.1	.8	5.3	3.9	.4	3.5	1.0	.4	.5	1.2
1935	6.6	.9	5.7	2.9	.3	2.6	1.4	.6	.9	2.2
1941	14.2	1.8	12.3	4.4	1.1	3.3	7.2	.7	6.4	2.6
1942	14.9	1.9	13.0	5.0	1.2	3.8	7.3	.7	6.6	2.6
1943	13.6	1.8	11.8	4.0	1.1	2.9	7.1	.7	6.5	2.5
1944	15.3	2.0	13.4	4.6	1.0	3.5	8.2	1.0	7.2	2.6
1945	15.3	2.2	13.1	4.7	1.1	3.6	8.1	1.1	7.0	2.5
1946	17.0	2.6	14.4	5.6	1.4	4.2	8.8	1.2	7.6	2.6
1947	18.5	2.5	16.0	5.6	1.3	4.3	9.3	1.2	8.1	3.6
1948	20.0	2.5	17.5	5.4	1.2	4.2	11.4	1.3	10.1	3.3
1949	17.6	2.3	15.3	4.6	1.3	3.3	9.9	1.0	8.9	3.1
1950	20.7	2.9	17.8	5.0	1.7	3.3	12.4	1.2	11.2	3.3
1951	25.1	3.8	21.3	6.3	2.2	4.1	14.1	1.6	12.5	4.7
1952	25.1	3.7	21.4	6.0	1.9	4.1	14.6	1.8	12.8	4.5
1953	26.3	4.2	22.1	5.4	2.2	3.2	16.2	2.0	14.2	4.7
1954	27.0	4.8	22.2	5.5	2.6	2.9	16.4	2.2	14.2	5.1
1955	30.9	5.3	25.6	6.3	2.7	3.6	18.4	2.6	15.8	6.2
1956	35.2	6.1	29.1	7.3	3.2	4.1	20.3	2.9	17.4	7.6
1957	34.4	6.2	28.2	7.2	3.2	4.0	19.8	3.0	16.8	7.4
1958[3]	33.2	5.9	27.3	6.4	2.8	3.6	20.2	3.1	17.1	6.6
1959[3]	36.0	6.5	29.5	6.9	3.1	3.8	22.0	3.4	18.6	7.1

[1] Data may not add to totals because of rounding.
[2] Practically all softwoods.
[3] Preliminary estimates.

Source: Bureau of the Census, U.S. Department of Commerce (22); Forest Service, U.S. Department of Agriculture (17).

TABLE 8. --Pulpwood consumption in the United States by source of wood, selected years 1909-1959

(Thousand cords)

Year	Total consumption[1]	Domestic production			Net imports
		Total	Roundwood	Residues	
1909	4,002	3,208	2,959	249	794
1910	4,094	3,147	2,884	263	948
1911	4,328	3,390	3,109	281	938
1914	4,471	3,641	3,387	254	830
1916	5,229	4,445	4,244	201	784
1917	5,480	4,706	4,472	234	774
1918	5,251	4,506	4,351	155	745
1919	5,478	4,446	4,271	175	1,032
1920	6,114	5,015	4,845	170	1,100
1921	4,557	3,740	3,673	67	817
1922	5,549	4,499	4,411	88	1,050
1923	5,873	4,637	4,533	104	1,236
1924	5,768	4,720	4,601	119	1,048
1925	6,094	5,005	4,849	156	1,088
1926	6,766	5,490	5,309	181	1,277
1927	6,751	5,527	5,241	286	1,224
1928	7,160	5,795	5,339	456	1,366
1929	7,645	6,412	5,851	561	1,233
1930	7,196	6,099	5,503	596	1,096
1931	6,723	5,985	5,427	558	738
1932	5,633	4,891	4,450	441	742
1933	6,582	5,964	5,484	480	618
1934	6,797	5,980	5,744	236	817
1935	7,628	6,591	6,298	293	1,037
1936	8,716	7,527	7,197	330	1,189
1937	10,394	8,895	8,330	565	1,499
1938	9,194	7,953	7,722	231	1,241
1939	10,816	9,735	9,416	319	1,081
1940	13,743	12,369	12,094	275	1,374
1941	16,579	14,176	13,951	225	2,208
1942	17,275	14,902	14,702	200	2,158
1943	15,645	13,580	13,391	189	1,676
1944	16,758	15,349	15,062	287	1,630
1945	16,913	15,253	14,803	450	1,688
1946	17,818	16,982	16,382	600	1,942
1947	19,714	18,542	17,792	750	1,998
1948	21,189	20,026	19,101	925	2,268
1949	19,945	17,619	16,544	1,075	1,639
1950	23,627	20,712	19,462	1,250	1,807
1951	26,522	25,128	23,728	1,400	2,637
1952	26,476	25,065	23,497	1,568	2,293
1953	28,140	26,319	24,594	1,725	1,537
1954	29,436	26,972	25,072	1,900	1,583
1955	33,356	30,948	28,273	2,675	1,869
1956	35,749	35,196	31,696	3,500	1,880
1957	35,746	34,422	30,145	4,277	1,759
1958	35,248	33,239	27,818	5,421	1,331
1959[2]	37,414	36,000	30,000	6,000	1,114

[1] Includes changes in stocks beginning in 1941.
[2] Preliminary estimates.

Source: Bureau of the Census, U.S. Department of Commerce; Forest Service, U.S. Department of Agriculture; and American Pulpwood Association.

TABLE 9.--Pulpwood prices at local delivery points, 1940-1959

(Dollars per standard cord, including bark)

Year	Southern pine	Spruce	Aspen
1940	4.20	9.00	4.25
1941	4.60	10.50	4.75
1942	6.00	12.25	6.90
1943	7.20	14.75	8.75
1944	8.20	15.00	9.00
1945	8.40	15.00	9.60
1946	10.10	16.50	10.00
1947	11.00	23.75	11.50
1948	11.70	22.25	12.00
1949	11.00	18.50	9.25
1950	11.90	19.50	9.50
1951	13.80	22.50	10.50
1952	13.90	25.00	12.25
1953	13.90	23.25	12.00
1954	14.00	24.25	12.50
1955	14.40	24.75	11.50
1956	15.40	26.00	12.25
1957	15.50	26.00	11.75
1958	15.60	26.25	12.00
1959[1]	15.60	26.25	11.50

[1] Preliminary estimates.

Source: Southern pine, Forest Service, U.S. Department of Agriculture; spruce and aspen, University of Wisconsin, Extension Forestry Office (30).

TABLE 10. --Production[1] of veneer logs and bolts in the United States, selected years, 1905-1959

(Million board feet, log scale)

Year	All species	Softwoods	Hardwoods
1905	181	13	168
1906	329	52	277
1907	349	39	310
1908	383	51	332
1909	436	56	380
1910	477	49	428
1911	445	51	394
1919	577	93	484
1921	400	70	330
1923	646	151	495
1925	735	194	541
1927	962	290	672
1929	1,113	394	719
1931	696	228	468
1933	700	282	418
1935	824	340	484
1937	1,114	460	654
1939	1,194	544	650
1942	1,736	797	939
1943	1,594	659	935
1944	1,533	647	886
1945	1,404	546	858
1947	1,570	751	819
1951	2,271	1,232	1,039
1952	2,467	1,548	919
1953	2,815	1,861	954
1954	2,894	1,978	916
1955	3,433	2,431	1,002
1956	[2] 3,444	2,493	[2] 951
1957	[2] 3,307	2,455	[2] 852
1958	[2] 3,566	[2] 2,709	[2] 857
1959	[2] 4,187	[2] 3,147	[2] 1,040

[1] Includes small volumes of imported logs.
[2] Preliminary estimates.

Source: Bureau of the Census, U.S. Department of Commerce (19, 20); Forest Service, U.S. Department of Agriculture.

TABLE 11.--Supplies, requirements, and prices, rosin by types, selected crop years beginning April 1, 1930 and annually, 1948-1959

(520-lb. drums)

Crop year beginning April 1	Commodity and type	Supply				Requirements			Carry-out stocks[1]	Average price per 100# net[6]
		Carry-in stocks[1]	Production	Imports	Total supply	Domestic	Export	Total		
		Drums	*Drums*	*Drums*	*Drums*	*Drums*	*Drums*	*Drums*	*Drums*	*Dollars*
1930	Gum	(2)	1,620,726	725	(2)	[3] 605,093	834,907	[3] 1,440,000	(2)	2.18
	S. D. wood	(2)	351,134	0	(2)	[3] 204,782	140,603	345,385	(2)	--
	Total	487,200	1,971,860	725	2,459,785	809,875	975,510	1,785,385	674,400	--
1935	Gum	(2)	1,360,950	2,290	(2)	[3] 789,648	740,352	[3] 1,530,000	(2)	1.97
	S. D. wood	(2)	460,243	0	(2)	[3] 240,784	223,198	463,982	(2)	--
	Total	783,144	1,821,193	2,290	2,606,627	1,030,432	963,550	1,993,982	612,645	--
1940	Gum	1,127,719	938,911	1,788	2,068,418	525,494	220,337	745,831	1,322,587	1.98
	S. D. wood	127,798	778,581	0	906,379	526,165	203,473	729,638	176,741	--
	Total	1,255,517	1,717,492	1,788	2,974,797	1,051,659	423,810	1,475,469	1,499,328	--
1945	Gum	265,881	694,476	9,795	970,152	627,294	105,354	732,648	237,504	6.50
	S. D. wood	122,385	757,560	0	879,945	640,095	101,456	741,551	138,394	--
	Total	388,266	1,452,036	9,795	1,850,097	1,267,389	206,810	1,474,199	375,898	--
1948	Gum	162,090	921,220	1,071	1,084,381	370,583	236,228	606,811	477,570	7.39
	S. D. wood	115,890	1,154,890	0	1,270,780	864,071	266,049	1,130,120	140,660	--
	Total	277,980	2,076,110	1,071	2,355,161	1,234,654	502,277	1,736,931	618,230	--
1949	Gum	477,570	924,900	4,229	1,406,699	347,152	256,927	604,079	802,620	6.47
	S. D. wood	140,660	1,098,610	0	1,239,270	842,512	305,098	1,147,610	91,660	--
	Tall oil (est.)	0	4,000	0	4,000	0	0	0	4,000	--
	Total	618,230	2,027,510	4,229	2,649,969	1,189,664	562,025	1,751,689	898,280	--
1950	Gum	802,620	797,620	4,475	1,604,715	550,584	595,591	1,146,175	458,540	6.31
	S. D. wood	91,660	1,339,410	0	1,431,070	985,348	345,682	1,331,030	100,040	--
	Tall oil (est.)	4,000	35,000	0	39,000	37,000	(4)	37,000	2,000	--
	Total	898,280	2,172,030	4,475	3,074,785	1,572,932	941,273	2,514,205	560,580	--
1951	Gum	458,540	716,350	1,980	1,176,870	392,190	293,140	685,330	491,540	8.73
	S. D. wood	100,040	1,333,040	0	1,433,080	923,479	278,561	1,202,040	231,040	--
	Tall oil (est.)	2,000	35,000	0	37,000	30,000	(4)	30,000	7,000	--
	Total	560,580	2,084,390	1,980	2,646,950	1,345,669	571,701	1,917,370	729,580	--
1952	Gum	491,540	638,360	3,000	1,132,900	312,563	138,577	451,140	681,760	7.53
	S. D. wood	231,040	1,082,530	0	1,313,570	917,178	218,062	1,135,240	178,330	--
	Tall oil (est.)	7,000	30,000	0	37,000	31,000	(4)	31,000	6,000	--
	Total	729,580	1,750,890	3,000	2,483,470	1,260,741	356,639	1,617,380	866,090	--
1953	Gum	681,760	531,620	1,410	1,214,790	348,050	132,100	480,150	734,640	7.72
	S. D. wood	178,330	1,213,340	0	1,391,670	913,880	384,350	1,298,230	93,440	--
	Tall oil (est.)	6,000	35,000	0	41,000	37,000	(4)	37,000	4,000	--
	Total	866,090	1,779,960	1,410	2,647,460	1,298,930	516,450	1,815,380	832,080	--
1954	Gum	734,640	527,700	390	1,262,730	345,220	208,840	554,060	708,670	7.91
	S. D. wood	93,440	1,342,370	0	1,435,810	887,420	458,470	1,345,890	89,920	--
	Tall oil (est.)	4,000	50,000	0	54,000	49,000	(4)	49,000	5,000	--
	Total	832,080	1,920,070	390	2,752,540	1,281,640	667,310	1,948,950	803,590	--
1955	Gum	708,670	452,970	650	1,162,290	406,689	151,091	557,780	604,510	8.45
	S. D. wood	89,920	1,369,440	0	1,459,360	945,892	400,598	1,346,490	112,870	--
	Tall oil (est.)	5,000	125,000	0	130,000	115,000	(4)	115,000	15,000	--
	Total	803,590	1,947,410	650	2,751,650	1,467,581	551,689	2,019,270	732,380	--
1956	Gum	604,510	444,590	650	1,049,750	347,450	136,050	483,500	566,250	8.37
	S. D. wood	112,870	1,324,220	0	1,437,090	875,260	467,960	1,343,220	93,870	--
	Tall oil (est.)	15,000	225,000	0	240,000	210,000	(4)	210,000	30,000	--
	Total	732,380	1,993,810	650	2,726,840	1,432,710	604,010	2,036,720	690,120	--
1957	Gum	566,250	399,910	400	966,560	283,640	123,470	407,110	559,450	7.90
	S. D. wood	93,870	1,195,990	0	1,289,860	798,230	420,890	1,219,120	70,740	--
	Tall oil (est.)	30,000	269,270	0	299,270	260,610	(4)	260,610	38,660	--
	Total	690,120	1,865,170	400	2,555,690	1,342,480	544,360	1,886,840	668,850	--
1958	Gum	559,450	369,350	600	929,400	278,430	101,630	380,060	549,340	8.33
	S. D. wood	70,740	1,182,620	0	1,253,360	846,310	342,870	1,189,180	64,180	--
	Tall oil	38,660	305,060	0	343,720	252,220	64,450	316,670	27,050	--
	Total	668,850	1,857,030	600	2,526,480	1,376,960	508,950	1,885,910	640,570	--
1959 (est.)	Gum	550,000	350,000	[5] 1,000	901,000	470,000	220,000	690,000	211,000	9.35
	S. D. wood	64,000	1,150,000	0	1,214,000	834,000	330,000	1,164,000	50,000	--
	Tall oil	27,000	350,000	0	377,000	279,000	70,000	349,000	28,000	--
	Total	641,000	1,850,000	[5] 1,000	2,492,000	1,583,000	620,000	2,203,000	289,000	--

[1] Includes CCC loan stocks. These are gross stocks and include rosin sold and awaiting shipment.
[2] No breakdown practicable from existing information.
[3] Estimated.
[4] Prior to 1958, exports of tall oil rosin were combined with steam distilled wood rosin exports as reported by the Bureau of the Census. Consequently, the estimated domestic consumption of tall oil rosin necessarily included steam distilled wood rosin to the extent of such tall oil rosin exports.
[5] Includes all types of rosin.
[6] In drums f.o.b. production points.

Source: Reports of Agricultural Marketing Service, USDA, and Bureau of the Census, Department of Commerce; records of Commodity Stabilization Service, USDA.

TABLE 12.--Supplies, requirements, and prices, turpentine by types, selected crop years beginning April 1, 1930 and annually, 1948-1959

(50-gal. bbls.)

Crop year beginning April 1	Commodity and type	Supply				Requirements			Carry-out stocks[1]	Average price per gallon[6]
		Carry-in stocks[1]	Production	Imports	Total supply	Domestic	Export	Total		
		Barrels	*Barrels*	*Barrels*	*Barrels*	*Barrels*	*Barrels*	*Barrels*	*Barrels*	*Dollars*
1930.....	Gum.....	(2)	598,769	7,931	(2)	[3] 288,516	309,484	[3] 598,000	(2)	.333
	Wood (Total).....	(2)	86,533	0	(2)	84,404	17,829	[3] 102,233	(2)	--
	S. D.....	(2)	76,366	0	(2)	(2)	(2)	(2)	(2)	--
	Sulphate.....	(2)	3,969	0	(2)	(2)	(2)	(2)	(2)	--
	D. D.....	(2)	6,198	0	(2)	(2)	(2)	(2)	(2)	--
	Total.....	127,000	685,302	7,931	820,233	372,920	327,313	700,233	120,000	--
1935.....	Gum.....	(2)	497,000	12,495	(2)	[3] 269,918	205,082	[3] 475,000	(2)	.376
	Wood (Total).....	(2)	105,908	0	(2)	[3] 82,326	19,300	[3] 101,626	(2)	--
	S. D.....	(2)	88,875	0	(2)	(2)	(2)	(2)	(2)	--
	Sulphate.....	(2)	11,712	0	(2)	(2)	(2)	(2)	(2)	--
	D. D.....	(2)	5,321	0	(2)	(2)	(2)	(2)	(2)	--
	Total.....	191,359	602,908	12,495	806,762	352,244	224,382	576,626	230,136	--
1940.....	Gum.....	167,943	343,938	16,688	528,569	278,707	103,127	381,834	146,735	.240
	Wood (Total).....	52,324	222,403	0	274,727	183,824	27,728	211,552	63,175	--
	S. D.....	(2)	161,161	0	(2)	(2)	(2)	(2)	(2)	--
	Sulphate.....	(2)	54,081	0	(2)	(2)	(2)	(2)	(2)	--
	D. D.....	(2)	7,161	0	(2)	(2)	(2)	(2)	(2)	--
	Total.....	220,267	566,341	16,688	803,296	462,531	130,855	593,386	209,910	--
1945.....	Gum.....	168,011	244,252	14,932	427,195	301,996	67,111	369,107	58,088	.791
	Wood (Total).....	34,535	243,879	0	278,414	210,419	25,334	235,753	42,661	--
	S. D.....	(2)	129,101	0	(2)	(2)	(2)	(2)	(2)	--
	Sulphate.....	(2)	110,262	0	(2)	(2)	(2)	(2)	(2)	--
	D. D.....	(2)	4,516	0	(2)	(2)	(2)	(2)	(2)	--
	Total.....	202,546	488,131	14,932	705,609	512,415	92,445	604,860	100,749	--
1948.....	Gum.....	87,390	324,330	13,613	425,333	227,287	70,916	298,203	127,130	.428
	Wood (Total).....	107,960	334,810	0	442,770	294,442	45,768	340,210	102,560	--
	S. D.....	(2)	207,160	0	(2)	(2)	(2)	(2)	(2)	--
	Sulphate.....	(2)	124,870	0	(2)	(2)	(2)	(2)	(2)	--
	D. D.....	(2)	2,780	0	(2)	(2)	(2)	(2)	(2)	--
	Total.....	195,350	659,140	13,613	868,103	521,729	116,684	638,413	229,690	--
1949.....	Gum.....	127,130	323,010	14,170	464,310	240,380	99,270	339,650	124,660	.384
	Wood (Total).....	102,560	350,280	0	452,840	315,256	56,284	371,540	81,300	--
	S. D.....	(2)	199,630	0	(2)	(2)	(2)	(2)	(2)	--
	Sulphate.....	(2)	147,500	0	(2)	(2)	(2)	(2)	(2)	--
	D. D.....	(2)	3,150	0	(2)	(2)	(2)	(2)	(2)	--
	Total.....	229,690	673,290	14,170	917,150	555,636	155,554	711,190	205,960	--
1950.....	Gum.....	124,660	271,880	16,771	413,311	239,940	137,771	377,711	35,600	.551
	Wood (Total).....	81,300	436,670	0	517,970	354,117	70,693	424,810	93,160	--
	S. D.....	(2)	237,080	0	(2)	(2)	(2)	(2)	(2)	--
	Sulphate.....	(2)	194,180	0	(2)	(2)	(2)	(2)	(2)	--
	D. D.....	(2)	5,410	0	(2)	(2)	(2)	(2)	(2)	--
	Total.....	205,960	708,550	16,771	931,281	594,057	208,464	802,521	128,760	--
1951.....	Gum.....	35,600	246,460	19,092	301,152	174,571	67,251	241,822	59,330	.763
	Wood (Total).....	93,160	437,500	0	530,660	352,286	43,254	395,540	135,120	--
	S. D.....	(2)	229,590	0	(2)	(2)	(2)	(2)	(2)	--
	Sulphate.....	(2)	203,430	0	(2)	(2)	(2)	(2)	(2)	--
	D. D.....	(2)	4,480	0	(2)	(2)	(2)	(2)	(2)	--
	Total.....	128,760	683,960	19,092	831,812	526,857	110,505	637,362	194,450	--
1952.....	Gum.....	59,330	217,360	19,636	296,326	173,084	43,042	216,126	80,200	.534
	Wood (Total).....	135,120	347,580	0	482,700	294,635	39,115	333,750	148,950	--
	S. D.....	(2)	175,090	0	(2)	(2)	(2)	(2)	(2)	--
	Sulphate.....	(2)	169,560	0	(2)	(2)	(2)	(2)	(2)	--
	D. D.....	(2)	2,930	0	(2)	(2)	(2)	(2)	(2)	--
	Total.....	194,450	564,940	19,636	779,026	467,719	82,157	549,876	229,150	--
1953.....	Gum.....	80,200	177,680	22,830	280,710	156,500	34,880	191,380	89,330	.516
	Wood (Total).....	148,950	360,170	0	509,120	348,470	53,070	401,540	107,580	--
	S. D.....	(2)	193,090	0	(2)	(2)	(2)	(2)	(2)	--
	Sulphate.....	(2)	164,220	0	(2)	(2)	(2)	(2)	(2)	--
	D. D.....	(2)	2,860	0	(2)	(2)	(2)	(2)	(2)	--
	Total.....	229,150	537,850	22,830	789,830	504,970	87,950	592,920	196,910	--
1954.....	Gum.....	89,330	175,940	15,360	280,630	145,950	50,240	196,190	84,440	.519
	Wood (Total).....	107,580	441,860	0	549,440	392,150	65,620	457,770	91,670	--
	S. D.....	(2)	207,700	0	(2)	(2)	(2)	(2)	(2)	--
	Sulphate.....	(2)	231,750	0	(2)	(2)	(2)	(2)	(2)	--
	D. D.....	(2)	2,410	0	(2)	(2)	(2)	(2)	(2)	--
	Total.....	196,910	617,800	15,360	830,070	538,100	115,860	653,960	176,110	--

See footnotes at end of table.

TABLE 12.--Supplies, requirements, and prices, turpentine by types, selected crop years beginning April 1, 1930 and annually, 1948-1959--Continued

Crop year beginning April 1	Commodity and type	Supply				Requirements			Carry-out stocks[1]	Average price per gallon[6]
		Carry-in stocks[1]	Production	Imports	Total supply	Domestic	Export	Total		
		Barrels	*Barrels*	*Barrels*	*Barrels*	*Barrels*	*Barrels*	*Barrels*	*Barrels*	*Dollars*
1955.....	Gum.....	84,440	149,000	18,441	251,881	133,866	45,845	179,711	72,170	.556
	Wood (Total).....	91,670	506,540	0	598,210	442,581	56,119	498,700	99,510	--
	S. D.....	(2)	201,270	0	(2)	(2)	(2)	(2)	(2)	--
	Sulphate.....	(2)	302,970	0	(2)	(2)	(2)	(2)	(2)	--
	D. D.....	(2)	2,300	0	(2)	(2)	(2)	(2)	(2)	--
	Total.....	176,110	655,540	18,441	850,091	576,447	101,964	678,411	171,680	--
1956.....	Gum.....	72,170	143,830	23,270	239,270	129,440	64,700	194,140	45,130	.555
	Wood (Total).....	99,510	501,100	0	600,610	430,680	60,450	491,130	109,480	--
	S. D.....	(2)	194,750	0	(2)	(2)	(2)	(2)	(2)	--
	Sulphate.....	(2)	305,310	0	(2)	(2)	(2)	(2)	(2)	--
	D. D.....	(2)	1,040	0	(2)	(2)	(2)	(2)	(2)	--
	Total.....	171,680	644,930	23,270	839,880	560,120	125,150	685,270	154,610	--
1957.....	Gum.....	45,130	129,080	14,370	188,580	113,530	32,170	145,700	42,880	.543
	Wood (Total).....	109,480	497,740	0	607,220	451,710	47,290	499,000	108,220	--
	S. D.[4].....	(2)	185,980	0	(2)	(2)	(2)	(2)	(2)	--
	Sulphate.....	(2)	311,760	0	(2)	(2)	(2)	(2)	(2)	--
	Total.....	154,610	626,820	14,370	795,800	565,240	79,460	644,700	151,100	--
1958.....	Gum.....	42,880	120,300	22,150	185,330	121,900	30,100	152,000	33,330	.513
	Wood (Total).....	108,220	487,940	0	596,160	453,180	42,410	495,590	100,570	--
	S. D.....	[3] 83,000	172,600	0	255,600	153,870	25,730	179,600	[3] 76,000	--
	Sulphate.....	[3] 25,220	315,340	0	340,560	299,310	16,680	315,990	[3] 24,570	--
	Total.....	151,100	608,240	22,150	781,490	575,080	72,510	647,590	133,900	--
1959 (est.)	Gum.....	33,000	113,000	[5] 20,000	166,000	112,000	28,000	140,000	26,000	.535
	Wood (Total).....	101,000	500,000	0	607,000	464,000	36,000	500,000	107,000	--
	S. D.....	[3] 76,000	161,000	0	237,000	134,000	26,000	160,000	77,000	--
	Sulphate.....	[3] 25,000	345,000	0	370,000	330,000	10,000	340,000	30,000	--
	Total.....	134,000	619,000	[5] 20,000	773,000	576,000	64,000	640,000	133,000	--

[1] Includes CCC loan stocks (beginning 1935). These are gross stocks and include turpentine sold and awaiting shipment.
[2] No breakdown practicable from existing information.
[3] Estimated.
[4] Includes destructively distilled turpentine. This type of turpentine is omitted from data beginning with the 1958 crop year.
[5] Includes all types of turpentine.
[6] Bulk at production points.

Source: Reports of Agricultural Marketing Service, USDA, and Bureau of the Census, Department of Commerce.

GPO 882670